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LIPPINCOTT'S HOME ECONOMICS TEXTS

EDITED BY BENJAMIN R. ANDREWS, PH.D.

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

PROBLEMS IN HOME LIVING

BY

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EDITED BY BENJAMIN R. ANDREWS, PH.D.
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TO LOUISE, MARY ELIZABETH
AND THEIR SCHOOLMATES

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FOREWORD

At the close of a visit to the United States about eighty years ago, Brillat Savarin summarized his opinion of American civilization by exclaiming, "One hundred religions and only one sauce." He saw America before it had fairly begun to emerge from its necessary period of crude pioneering; before the majority of people had had time and opportunity to make much progress in establishing the amenities of living. The country had not then reached the "sauce" stage.

But that period has passed. We still find it necessary to struggle strenuously to gain a livelihood but we are preoccupied increasingly with a desire to enrich our lives. The pioneers having "killed the snakes and built the bridges," we are busy paving the roads, developing parks and playgrounds, establishing and improving schools, refining our technique, increasing our efficiency and our leisure, learning how to live.

The processes of learning how to live and of living center in the home. The kind of life one lives depends largely upon the kind of household of which one is a member. This is particularly true as applied to young people. It is in the home that the twig is bent. If one's family life lacks the amenities, the spiritual beauties, the "sauces" that bring out the fine savor of which life is capable, one is likely to be seriously handicapped. Perhaps the highest mission of home-making is to provide these "sauces" along with the physical well-being which prevails, of course, in every good home.

Genuine home-making is much more than what is called

housekeeping. Good housekeeping is a *sine qua non* of home-making, but it is not sufficient. In addition to this, successful home-making requires provision for the culture and happiness of the family, for the intellectual, spiritual and aesthetic well-being of the household. It is not confined to the interior of the house. It extends to the immediate surroundings of the dwelling and to the entire community. Genuine home-making is an exceedingly difficult and supremely important undertaking. It is a business, a science and an art. It is the greatest of all the professions.

These fundamental truths are clearly recognized by the authors of *Problems in Home Living*. Combining sound scientific training with extensive successful experience in teaching, educational administration, child-rearing, and home-making, the authors have written a book that is interesting, stimulating and practical. It is based upon a sound philosophy of home-making and upon a clear conception of the home-maker's place in modern civilization. Its tone is wholesome and sympathetic. A careful study of the book by students of home economics will aid in developing toward the home-maker's profession a point of view that is sane, well informed and self-respecting.—F. D. Farrell, President, Kansas State Agricultural College.

THE AUTHORS' PREFACE AND NOTES TO TEACHER

The influence of the home has long been recognized as a powerful force in the life of the nation. The individual citizen, being a product of the home, reflects directly in his own standards of living the ethical and intellectual standards as well as the physical standards of his home. To the extent home standards are high, the standards of the nation are raised. It has often been stated that the greatness of America lies not in the granaries, filled with corn, nor in the railroads stretching across the continent, nor yet in mighty armies. The greatness of America lies in the American home.

If the greatness of the nation is to be built not in the victories of armies, nor in the strategy of statesmen, but in the successful functioning of the millions of home-making partnerships throughout the country, then knowledge of the functions of these partnerships and the ability to solve the problems arising in their development is vitally important to our people.

School boys and girls, as members of family groups, have already become aware of many problems arising in the home-making partnership. Their interest in achieving their own comfort and the happiness of their families, as these are affected by the efficiency of their homes, is assurance of interest in these problems. Further, they are to become the founders of the homes of the next generation and of this they are well enough aware to give the matter educational significance. Because of these facts, it is essential that a basis be established for the consideration of problems arising in home-living, and that proper attitudes toward these problems be developed. When the founders-to-be of homes

realize that successful homes are not accidents or gifts of a beneficent Providence and that the phrase, "and they lived happily ever after," is not an inevitable sequel to a romantic episode, a long step will be taken toward understanding the basic problem of successful home living. The study of home living then needs to be carried on seriously, in terms of realities of the daily life of the young people, with little sentimentality but with an appreciation of the deep sentiments and human values involved. Considered in this manner, the problems arising in the home lend themselves to solution, as do other problems of human relationships, of economics, and of health.

Activity analyses and studies of the home-maker's and the girl's home duties and activities have been made. These have shown that home-making is a composite vocation, involving many activities of all types, varying from the lower skills to the highest type of managerial ability; and that the care of children, the management of the home, the maintenance of the health of the family require a large part of the home-maker's time and thought.

The purpose of instruction in home living is, then, the bringing of this phase of the students' environment into the field of the "knowable and controllable;" the developing of a spirit of fairness, and a scientific attitude, in considering the home and its problems. Such a background will not only help the individual in the present but will create in him or her the desire to continue further studies in this line.

This book, *Problems in Home Living*, has been written to present this field to the high-school student. It is the result of several years classroom experience with teaching problems in home living to high-school girls and several years of home contacts with adolescents.

The unit-problem organization is used because the writers

believe that the best teaching is done through the use of problems. Girls should be given an opportunity to develop their judging and reasoning powers, and problem-solving methods aim to bring this about. Lists of additional problems and exercises are given at the close of each unit to provide for the various levels of ability. References are also suggested for each unit in order that the girls may be encouraged to read more than is given in the text.

This book has been so organized that it may be used for either the one-semester or the two-semester course. If the book is used in a one-semester course, some of the problems or even some of the units may be omitted. This can be done easily. Though the units are related to each other and to a certain extent have been arranged in the order of their difficulty, each unit is practically complete in itself and represents a unit of learning. The use of the additional problems and exercises makes possible extending the use of the book through two semesters.

In the planning of this book we have had many helpful suggestions from *Methods of Teaching in the Secondary Schools* by Dr. Henry C. Morrison.

We wish to express grateful appreciation to members of the staff and to interested friends who have helped us materially in the preparation of the book. We also are mindful of the many high-school girls whose enthusiasm and interest in the problems in home living have given us the inspiration and desire to organize and submit this material for the use of other students.

To the Pupil

This book, *Problems in Home Living*, consists of three sections which are composed of units. Each unit presents a major topic which is of every-day importance

to the home-maker and other members of the family. In each unit there are presented several problems with which families are confronted almost constantly, and for which a solution must be sought practically always.

At the beginning of each unit you will find a list of "Introductory Studies." Most of these can be answered readily from your own experience, and will serve to recall what you already know about the topic. The answers may be written in your notebook, or submitted in whatever manner your teacher may suggest. When this is done you are ready for the "Presentation of the Unit." Read this carefully, and present any points which you do not understand for class discussion. The Presentation will give you a general idea of the subject and the problems which must be solved in order to master this major topic.

After you have finished the Presentation of the Unit you may then seek the solution of the "Problems." This can be done by carefully studying each problem, reading the references, and performing all of the exercises. When you have solved the problems, it is time for a discussion of the unit. It is impossible to include in any unit all of the problems that may arise in considering the subject, but you will find additional problems listed at the end of the unit, to help you learn more about the different topics. With the help of your teacher select the ones which you wish to study, and when you have completed your problems or exercises make a report to your teacher in whatever form she desires. Sometimes reports are made to the class and an opportunity provided for class discussion.

A broader knowledge of the subject may of course be gained through the additional problems, readings, and exercises than is possible through the limited required work of the unit.

Particularly watch for questions and problems that will arise in your own experience and in the life of your family at home. When you discover such a question or problem try to find out what its solution is. Your teacher may let you study some problem that you find yourself.

At the close of each unit you will find a list of questions which will enable you to check what you have learned in your study. If you cannot answer to your satisfaction any question, go back and review the problem. If the subject matter is still not clear, consult your teacher. You should be unwilling to leave any question until the correct answer is found.

Gradually build up a personal collection of Home Economics bulletins from the State University, State College, United States Department of Agriculture; good articles from the household magazines; and also select advertising material that seems reliable. In this manner develop your own working library to help you solve your problems of home living. A scrapbook or card catalog of information may well be kept.

Try out everything that you can at home, coöperating with your mother and family. Learn to be a skillful worker, and more important, a wise manager or planner in housekeeping and home-making, and most important of all, a good coöperator in home living.

THE AUTHORS

March, 1929

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SECTION I—FAMILY RELATIONSHIP AND HOME MANAGEMENT

PROBLEMS IN HOME LIVING

SECTION I. FAMILY RELATIONSHIP AND HOME MANAGEMENT

UNIT ONE

THE HOME AND THE FAMILY

Introductory Studies.—1. What should the home do for the members of the family?

2. How does your home differ from that of the colonial girl?
3. Make a list of four characteristics of an ideal home.

Presentation of the Unit.—Have you ever stood high above a city or village as dark came on, and watched the lights gleam out here and there down the streets as each home flashed a welcome to the father homeward bound after a busy day? If you have had this experience perhaps your mind wandered away from your own community out over the state and nation with the question, "How many homes are there in these United States?" If the twinkling lights were to multiply before your eyes so that you could see a light for every home you would be unable to count them, for there are in our nation 24,452,676 homes. Of these 11,212,653 are village and farm homes, scattered over the prairies, valleys, and mountain sides. The remaining 13,240,023 are city homes including crowded flats, modern apartments, and stately palaces.

Why do people choose to live in homes? What is it that makes the bond of home so strong? Have you ever gone away from your home for a visit, having arranged to be

gone a week, or longer, only to find that long before you planned to return you were hurrying back? When you reached home there came to you a deep sense of peace and rest. There was something here that satisfied a desire within you.

This drawing power is, and ever has been, a characteristic of the home. Even when man lived in tents, moving

Fig. 1. An English cottage home.

about from place to place, he felt the call of home, and would sacrifice himself to protect his family and labor to secure food for them. The American Indians and the ancient Hebrews are examples of peoples having homes in temporary dwellings. However, although the ancient Hebrew loved his home, we must not make the mistake of assuming that he regarded his home as we do ours today. Such was

not the case, for the home has not always been as it is today. The spirit of the home has changed almost as much as the type of dwelling houses has changed.

In Biblical times the home centered around the comfort of its men. The women were "drawers of water," "laborers in the vineyard," and "gleaners in the field." The eldest son was most favored in every way, as you will recall from the story of Esau and Jacob. Although love existed in these

Fig. 2. A sod house in the prairie country.

early homes, justice and equality were not to be expected by the family members.

Later in our civilization great stone castles were built for the leading families. Here among the almost constant preparations for warfare, safeguarded by walls, drawbridges, gates, and bars, the family life was maintained. The stories of King Arthur's Round Table picture for us the romance of the period, but fail to show that life in a castle with cold stone floors, peep holes for windows, no heat, no plumbing, offered a poor physical background for family life, already

disrupted by the absence of the father on warring expeditions. In such homes the father was an autocrat and complete ruler over his household. His régime was apt to be stern and the children had no part in directing their own lives.

Fig. 3. A part of Carnarvon Castle, Wales. The birthplace of Edward II.

The home we like to read about is the American Colonial home. This home represented an independent unit in society. Here every activity was carried on. The wool sheared from the sheep became, through the skill of the housewife, coats and hose for the family; the milk from the cows was used to make the butter and cheese, and wheat

milled at home was used for bread. This home was the center both of production and consumption. Every member had a share in this home and was a part of its life. Here, however, the family was still an autocracy, held by the will of the father to his ideals. Because many of these men were fine, these early American homes, even though autocracies, led to the development of strong characters and ideals in the family members.

FIG. 4. Present-day American home. Courtesy H. E. Wickers, Kansas State Agri. College.

Our home today is unlike that of any other period. Modern science and invention have made great changes. Much of the work done in the home a generation ago has been taken outside to factories, thus lessening its productive activities. The social life of the family has also been affected by industrial changes and by the many new types of recreation; for example, the moving-picture theater. The ease of transportation has destroyed the isolation of our farm

and village homes, so that today the home is in no sense self-sufficient.

The real spirit of the home remains vital despite these changes. The problem for us today is to adjust our homes and home life to the changes in civilization rather than long for the "good old days" which will never return.

PROBLEM 1.—WHAT CONSTITUTES OUR FAMILY PATTERN?

If you were to fly over a village in an aeroplane you might comment, "That town stretches out like a quilt. Each place seems like a block pieced in a 'bungalow-garden-garage pattern.'" This phrases very well a fact we have all frequently noted. The physical equipment of our present day homes tends to fall in definite patterns. To a marked degree this is also true of the family groups that live within these homes. We may speak of this similarity of family groups as the *family pattern.*

Definite Family Patterns Exist.—The family pattern is not the same for all races nor for all time. There are many patterns for family life, yet usually only one pattern prevails anywhere at a given time. The community or nation seems like a quilt with a planned pattern repeated over again and again.

An exhibit of quilts pieced by women of colonial days was held in an art museum recently. One quilt was named "King Solomon's Star." One large star with points made of one thousand gaily colored pieces radiating from a large center circle to the edges of the quilt spread its glory out on a tan background. This might be humorously regarded as typifying the family pattern of King Solomon and his thousand wives and concubines—a pattern not unusual in ancient

times, for rulers, at least, and copied on a smaller scale by others.

Another quilt, called "Star of the East," consisted of twelve "star blocks," each star made up of many pieces of one certain color, shading from dark to light. Many colors were used for the blocks.

In the Orient the family includes the grandparents, the parents, with their unmarried children, their married children, and their families, and any distant relatives who have no closer family bond. All of these are housed in one establishment and are ruled by the grandfather or great-grandfather, should he be alive. There is one dominant note in this pattern and that is a regard for the family which manifests itself as ancestor worship. This colors all family relationships. Can you explain why? The individual becomes entirely a part of the family pattern, submerging his individuality in that of the group, just as the quilt piece became a part of the star.

In the exhibit there was one quilt before which people paused and exclaimed with pleasure. It had for its pattern a blue basket with pink roses appliquéd on a white background. In a way this might be said to typify the family pattern of our civilization. The white background would represent the mutual love and respect of the family members, the basket would represent the established home with adequate income, and the roses the members of the family—father—mother—children.

The Family Pattern Established Here Has Definite Characteristics.—Our family pattern includes husband and wife, with a child or children, bound together in love and respect for their mutual benefit. Here the family bond permits and aids in the development of the individual.

If you study the homes of your community you will note

that many are successful. To return to our illustration, all parts of the pattern are found in these homes, properly assembled, with a background of mutual love and respect. There are other homes in which the pattern is incomplete in some regard: the childless home of the wedded couple and the home of the unmarried business woman and her mother. There are also many families that have no established homes. There are other homes once complete in which the pattern has been broken. Perhaps the father or mother has died. Divorce or separation sometimes breaks the pattern.

There are still other homes that remind one of the work of childish fingers on a patchwork block. The pieces are all there, but the pattern is lost in the muddle of maladjustments between the various individuals, or between some member or members and the environment. There is no open break, but a casual visitor may easily be aware of the unhappiness and dissatisfaction that exists. What may have caused the confusion of such a block? How may it be put in order?

There Are Definite Factors That Affect the Integrity of the Family Pattern.—The first factor which we will consider as affecting the success of the family is the sound heredity of its members. This is the physical basis of successful family life. Do you understand why this is true?

The next great factor is the personal character of the members. Personal character includes such characteristics as honesty, responsibility, faithfulness, attitude toward work and toward life, and maturity. Why is the last item so important? Have you ever seen parents who seemed as childish as their children over differences of opinions; women of forty who acted like girls of fourteen; men of sixty who behaved like youths of twenty? Why do these people constitute problems in family patterns?

The third great factor that influences the success of the

family is the understanding, on the part of the man and the woman who establish a new home, of what the family pattern is. Only as people understand what they are trying to do, can they do it wisely.

The last factors in our list are adequate income for a decent living, and right standards. These are both important in family success. You will consider these further in later units.

Exercises.—A. What is your solution of the following problem?—(1.) A young woman, the only child of a widowed mother, married and had one child. She is now being encouraged by her mother to plan for a career, just as if she were not married. The mother, who is self-supporting, would like to direct her daughter's home. What will probably happen to the family if the young mother tries to work outside of the home? What will be the effect upon the woman herself? Upon the child? (2.) If her husband should die, how would the situation be changed?

B. Write a theme presenting the family pattern in one of the following countries: India, France, Turkey, or Ancient Rome.

C. Classify, without using names, families you know well, as to complete, incomplete, broken, and muddled patterns. Can you suggest a reason for the condition in each case?

PROBLEM 2.—WHAT IS A GOOD HOME?

In every period of history there have been successful homes among all peoples—successful at least in accordance with current standards. Differences in customs, in habits of speech and manner of living, have not prevented the home from furnishing certain satisfactions and joys to peoples of all times. Not all the people of any time have had successful homes. Perhaps they did not understand what constitutes a good home and how they could attain it.

A successful home means much to its members in the way of happiness, comfort, and development. In establishing a home the right kind of ideals and standards should be made.

Living beyond the income, going to extremes in social activities, neglecting the children for other interests, soon will make it an impossibility to achieve a good home, no matter how keen may be the desire for a happy home life.

A Good Home is More Than a House.—A common mistake is to suppose that if a fine house is provided a successful home is assured. Home and house are not synonymous terms. The house represents the material side. It has four walls, doors, windows, furnishings. It is concerned with things. The home represents the spiritual side. It is the family life as lived within the house.

If you have ever felt that a home could not be successful without wealth, you have been mistaken. Of course, there must be sufficient money to provide a decent standard of living. This is essential to a good home. With this provision made, however, the amount of happiness has no direct relationship to the amount of wealth.

One of the most successful homes we have ever known was one of small means. It was a joy to be in this home because of the wonderful spirit which existed within its walls. One of the most unsuccessful homes we have ever known was one of wealth. The home was elegant but no love existed between the husband and wife and little beyond selfish consideration was given to the children. In other cases the reverse may be true. The wealthy home may be the successful one and the less prosperous the unsuccessful. Material things alone do not make a home but family members who are tolerant, coöperative, and sympathetic with each other, and who love one another, can make a home anywhere.

A Good Home Has Definite Characteristics.—It is not an abstract ideal which is impossible to attain. There are great numbers of good homes throughout our land. Such a

home furnishes rest and security to its members and a desirable place to rear and train children. The home is to some extent a place of production and to a large extent a place of consumption. Within its walls, cloth is made into garments, food stuffs are transformed into appetizing meals, and through labor the equipment, furnishings, and clothing are maintained in good condition. This is the productive contribution of the home. Here also the clothing is worn

Fig. 5. An attractive home showing Spanish influence.
Courtesy of H. E. Wickers, Div. of Engineering, Kansas State Agr. College.

and the food is eaten. This constitutes the consumption of the home. All these activities must be carried on wisely if the home is successful.

A Good Home Furnishes Opportunity for Spiritual, Mental, Moral, and Physical Development.—One of the first considerations of the home is the health of its members. Even though man is less active than he was centuries ago he must have a strong body and a well-developed nervous system. Good nutritious food, fresh air, work, opportunity

for adequate exercise, sleep and rest, should be made possible by the home.

Since the home is primarily a place to train children, every effort should be made there to educate them for a worthy and useful place in life. That each member of the home may be trained according to his interests, needs, and capacities should be the goal of every home. Through the home, children receive their understanding of culture. True culture consists in doing productive work well, and taking joy in its accomplishment, and with the proceeds of one's work creating a wholesome manner of life for one's self and one's family.

The home should be interested in the spiritual and moral development of its members. It is the place for establishing religious ideals. The history of the race shows that people must have spiritual ideals to keep them well balanced. Reverence for God, then, should be taught in the home. The moral standards learned in the home are those which are most likely to become firmly rooted in character. Ideals of honor, a sense of responsibility, self-control, loyalty, and honesty, should be cultivated in the home.

The Success of the Home May Be Hindered.—Do you know a home that is unsuccessful? How do you account for its failure? Do the members of the family understand the hindrances in the way? Sometimes the worry and nagging of one member of the family seems to be the greatest hindrance to happy family life. Young people often say, "If mother only wouldn't worry!" or, "If father wouldn't fuss so!" Seldom is the case as simple as this sounds. The cause of "mother's worry" or "father's fussing" may be the appearance of wavering standards in their children or the conflict between the ideals of two generations.

Another frequent cause of unhappiness is the lack of

independent judgment on the part of one or more members of the family. Have you ever known a person who lacked the ability to make a decision and who depended largely upon the judgment of others? Such a person is apt to cause family unhappiness, not only because of his indefiniteness, but also because of his readiness to follow the crowd and be influenced by other people's opinions. Often family unhappiness is caused by living beyond the income in a foolish attempt "to keep up with the neighbors."

It would seem then that the hindrances to the success of the home may be either simple or complex. In either case they may be overcome only by being understood and intelligently met by the family as a whole.

Every Member of the Family Has a Part in Making the Home Successful.—You are probably already thinking about who is responsible for making a home successful. Maybe you have thought it was the duty of your mother or of your father. Impossible! No one member can ever make a home successful, but one uncoöperative member may ruin the joy of the entire family. Before you grumble or complain of your home make sure that you are not the disturbing element. In the home, as in any group enterprise, the concerted action of all is necessary for success. The Boy Scouts frequently use the term "teamwork." In no group is teamwork so essential as in the family.

Exercises.—A. The D family live in a large, beautiful house, furnished very elegantly. Mr. D provides the family with plenty of money and Mrs. D sees that every member is well dressed and is able to make a fine appearance. Mr. D is "boss" of his home. Every member obeys him and his wishes are laws in the home. Mrs. D makes no decisions until she has consulted him. The children may not bring guests to the home unless their father is willing. The D family is said to have a good home. How would you judge this home? What suggestions would you make for its improvement?

B. Write a description of your idea of an ideal home.

C. Mr. and Mrs. Brown have long been members of a church whose standards prohibit dancing and theater going. Their son and daughter, who are in high school, wish to participate in these social activities. To what would the resulting unhappiness in the family be due, the worry of the mother, the fussiness of the father, wavering standards, or conflicting ideals? How may a happy adjustment be made in this family?

D. Harry Brown is an attractive high-school boy with a pleasing personality. His family has insufficient funds to bear his college expenses. If he goes to school he must work. He would be eager to go to college if he could have the same money allowance that the other boys in his crowd have. He dreads any possible snubs if he should work his way through. His father and mother are unhappy about this. In what ways will Harry's decision affect him and his parents should he decide to stay at home? Should he decide to go to college?

PROBLEM 3.— HOW SHOULD THE RESPONSIBILITIES OF THE HOME BE DISTRIBUTED?

The Home Is a Coöperative Enterprise.—When two individuals establish a home, they have started a business undertaking of great importance to themselves and to society. This enterprise is more than a simple partnership, for the number of members in the firm may increase. It is not a corporation with its members having only a limited responsibility, but a coöperative concern with its members sharing fully in responsibility. If one person fails to do his part, the entire coöperative enterprise suffers, and peace and harmony are destroyed.

The Responsibilities of the Home Should Be Shared by All Members.—Many responsibilities in meeting economic, ethical, and social conditions arise in maintaining a home. If these are all placed upon one person, the home becomes a sorrow and a burden. We should ever keep in mind that these responsibilities should be cheerfully shared by every member, and each person's contribution is as necessary to the home as that of any other member.

The mother's responsibility consists of the management and administration of the home, and the performance of the home's productive activities. She is co-responsible with the father and other members of the family for the establishment of ideals and standards, and for the care and training of the children.

The father's responsibility consists of earning the money income of the family and sharing those other activities in which he is co-responsible with other members of the family. The father has a very important part in the training of the children and in contributing to the happy spirit of the home. Too often the father forgets that his responsibility for the home does not end with the paying of bills and accounts.

Children should learn early to wait upon themselves, to attend to their personal needs, and to help each other. They should care for their rooms and clothing, and assist with such household duties and activities as they are capable of performing. The most disagreeable person in the home is the member who is always trying to get his work done by someone else, or who is always unwilling to "lend a hand."

Frequently, a grandparent or other relative comes to make his home with the family. Such an addition is often accompanied with difficulty because the new member may come from a circle in which his wishes have been the first consideration. Very probably on previous visits to this home he received marked attention. Minor interferences in discipline were overlooked during his visit and his dietary preferences were indulged. On entering the family group as a permanent member he loses the right to such special privileges. If the members of the family have a sympathetic understanding of the problem of adjustment faced by the older person, conflict within the family circle will be pre-

vented and the right attitude toward old age will be developed in the children. With the older person, as with the children, some definite responsibility for the home is desirable. Unless ill, no member should expect to be waited upon by other members. No member should consider himself an autocrat whom the other members should serve, but should assume his responsibilities willingly.

Working for Our Home Increases Our Love for It.—Why is it best for us to do something for our home? We appreciate most those things for which we must work. A Great Teacher said a long time ago, "Where your treasure is there will your heart be also." This is still true. The more work or material contributions we put into the home, the more we love it. That which comes to us easily, we value lightly.

Exercises.—A. List the responsibilities of each member of your family in maintaining your home. Upon what basis is the division made?

B. Explain why every member should have a part in maintaining the home.

C. Mr. and Mrs. Brown have four children: two girls, ten and sixteen; and two boys, six and thirteen. Mr. Brown is manager of a shoe store. Mrs. Brown does all of her own work because the family income is not sufficient to allow for paid help. Mr. Brown belongs to several organizations, attends their meetings regularly, and enjoys going out to social functions. The oldest daughter, who is in high school, has many friends and interests and goes out a great deal. Mrs. Brown likes to go with her husband, but cannot find the time to do it. Her home duties are so many that she is kept busy making it possible for the other members to have the good times and the rest they wish. How could a more equal distribution of the home responsibilities help this family? What would be the first step to secure this?

PROBLEM 4.—HOW DOES FAMILY LIFE INFLUENCE ITS MEMBERS?

The idea of the family is deeply imbedded in the human race. It is supposed to have developed to protect the chil-

dren so that warriors would be available for defense of the tribe. There has been a widening of the purpose so that the family now has become not only a means of protection, but also an important means of transmitting the culture of the race. Great as these contributions to society are, that made through the influence of the family on its individual members is even more important.

Family Life Modifies Human Nature.—Have you ever known a person living alone to become selfish, disagreeable, and inconsiderate of others? Have you ever heard the remark, "John is so selfish, but then he has no brothers or sisters"? If one has no brothers or sisters one does not necessarily become selfish, of course, but one may more easily become so. When several people live together in a family, there is a constant "give and take." The needs, wishes, and ambitions of all members of the group interplay to such an extent that no one member is just what he would be without this family influence. Through this interplay, the family life becomes modified and the character of the individual is affected. As the number of members in the family increases, this interplay between the members of the family increases and greater modification of human nature occurs. The effect of a member of the family upon another member may be good or bad.

Have you ever known of some relative, perhaps distant, who somehow made you wish to behave very badly? Do you know why you were influenced in this way? If in a family there are members who interact upon each other in this way, the general effect of that family life upon its members is harmful and destructive to the development of a wholesome personality and character. Sometimes a mother or father pampers and spoils a child until he becomes so selfish and wilful that he grows up to be an undesirable

member of any social group or community. On the other hand, have you not known of families, as a result of fine family life, in which all the members manifested a good spirit of coöperation, not only in the home but in outside groups and community life?

Good Family Life Has a Refining Influence on Its Members.—Have you ever noticed that little children are not "refined" individuals? The young child is interested primarily in his own pleasures and desires. He seizes food because he is hungry, or snatches a toy from another child because its color attracts him, and makes large demands on the interest of those about him. He does not try to find out what interests others nor what they wish. He is self-centered.

Through the influence of good family life the child learns to respect the rights of others, to be interested in fairness, to become less selfish and more coöperative. Indeed, the child is so influenced by his early training and the character of his family that later training is often fruitless. Since this is true, good family life should be made possible for every child. Only in its intimacies, its kindly spirit, and its loving consideration can the finest and best qualities be developed in its members.

Good Family Life Develops High Ideals.—Outstanding among the contributions which the family life makes to the individual is the part it plays in the development of his ideals, and the conscious controlling standards it establishes. Whether we wish it or not, our ideals are very largely formulated for us by our family life. Good family life always exerts an influence toward high ideals. What are some ideals which should be developed in every family? Surely, ideals of honesty, love, loyalty, coöperativeness, thoughtfulness, and self-control belong in the list.

What permanent ideals are you receiving from your family group? What ideals are you helping other members of your group to establish? Perhaps you have never tried to put these ideals into words. In Mediæval times many families had crests or coats of arms which were composed of symbolic figures and a motto. This motto typified the ideals of the family, and served to remind the members of the

Fig. 6. The Coat of Arms of the Boyd Family.

Fig. 7. The Coat of Arms of the Blair Family. Permission from the Blair Genealogical Society.

family of the fealty they had sworn to these ideals. In America we have no coats of arms, but every family and its members are pledged by their participation in our democratic government to the ideals that make for good citizenship and effective living. It would be helpful for each of us to apply these same ideals of democracy, equality, and coöperation to our home life.

Good Family Life Provides Satisfactions for Its Members.—Family life should not only aid in the character and personality development of the individual, and in the establishment of his ideals, but should also supply those intangible satisfactions that give meaning to life. Have you not often completed a task that seemed hard, or kept your temper in a difficult time because you wished your family to be proud of you? Do you not feel sorry for those persons who have no family group of their "very own"? An inscription or dedication in a recent book reads as follows: "To my children and my wife. My comrades ever." How much meaning is conveyed in those words!

Good family life will always provide opportunity for growth and development as well as love, sympathy, encouragement, and happiness for its members.

Men and Women Generally Acknowledge the Influence of Their Home and Family Life.—Although some may have succeeded in spite of their home environment, there is no way of telling how much they would have done under better conditions.

Many poets have sung of their homes and of family life. Burns, Whittier, Longfellow, Riley, and Guest are in this list. Alcott, Rice, Norris, Sangster, and Fisher have written many stories for us concerning home life. Our literature contains many worthwhile contributions on the subject of the home.

It is well for us to recall frequently how much our home means to us, and to enjoy it to the fullest while we are yet a part of it.

Exercises.—A. Write a theme describing a home or family found in literature.

B. Do you know of any family coats of arms? Describe them and if possible explain their significance.

ing that traits may be developed in people. If family members know the traits which are necessary for happy living together, they can develop these traits within themselves by determination and effort.

Traits which contribute to good family life are also essential to good citizenship, and the benefits derived from their possession will influence the community and nation as well as the home. Read over the list of traits in the preceding topic and see if you think this statement is true.

Every Member Is Responsible for Contributing to the Family Life.—Just as every member of the family is responsible for part of the work of the home, so every member is responsible for contributing to the family life. Only through the coöperation of all the members of the group can the family life reach its best fulfilment. If each member has a keen appreciation of the opportunity afforded for his development, and an understanding of family ideals and family spirit, it will be easy for him to make his share of the adjustments necessary in the family. Only by a common sharing of the responsibility can joy and peace in the home be assured.

Since we as individuals need the family life, we must not value it lightly. It furnishes us with satisfactions and intimacies which are necessary for our development and happiness.

Exercises.—A. Select a family which meets or very nearly meets your ideal of family life. Without using names, present a description of some traits of this family for class discussion.

B. Make a list of the common every-day manners which add to the pleasure of the family. Suggest ways to encourage their use.

C. The Joneses are a family of six. They like to be together and are very fond of each other. What traits of character do you suppose are shared in common by the members of this family?

Can you Answer These Questions?—Answer each question as briefly as you can with one word, one phrase, or a short statement.

1. What income does a successful home require?
2. What is meant by a complete family pattern?
3. How does a home differ from a house?
4. What does a child learn through the influence of good family life?
5. Who is responsible for the success or failure of the home?
6. Why does good family life bring satisfactions to its members?
7. Why do family members need to develop traits of honesty, love, cleanliness, loyalty, and self-control?
8. For what purposes does the family exist?
9. How is the home of today different from that of the colonial period?
10. What effect does selfishness have on the home and the family?

Additional Problems and Exercises.—1. Read selections from the following for class discussion:

Alcott, Louisa M. "Little Women" (Chapters 1, 3, 19). Little, Brown & Co.

Antin, Mary. "The Promised Land" (Chapters 3 and 4). Houghton Mifflin Co.

Barrie, James M. "Margaret Ogilvey" (Chapters 3 and 5). Charles Scribner's Sons.

Chesterfield, Lord. "Letters to His Son" (Letters CXC and CXIX). J. B. Lippincott Co.

Deland, Margaret. "The Iron Woman" (Chapters 1 and 2). Harper & Bros.

Fisher, Dorothy Canfield. "Understood Betsy" (Chapters 2 and 3). Harcourt, Brace & Co.

—— "The Bent Twig." Harcourt, Brace & Co.

—— "The Home Maker" (Chapters 1 and 2). Harcourt, Brace & Co.

Hunt, Caroline. "Life of Ellen H. Richards" (pp. 22 to 31; 120 to 125). Whitcomb Barrows.

Johnston, Annie F. "Three Weavers." L. C. Page and Co.

Montgomery, Lucy M. "Ann of Avonlea" (Chapters 7 and 8). Grosset and Dunlap.

Norris, Kathleen. "Mother" (Chapter 2). Grosset and Dunlap.

Rice, Alice Hegan. "Mrs. Wiggs of the Cabbage Patch" (Chapters 1 and 6). Century Co.

Rolvaag, O. E. "Giants of the Earth" (Chapter 2). Harper & Bros.

The Bible. "Proverbs" (Chapter 31).

Wiggin, Kate Douglas. "Mother Carey's Chickens" (Chapters 1 to 4). Grosset and Dunlap.

2. List the various ways that a high-school girl may assume responsibility in her home.

3. Make a list of some of the most important problems of the home today. What do you consider are some probable causes of these problems?

4. Why does the home have an influence upon people?

5. What are the results if desirable traits are not developed in the family members?

6. What are the advantages of continuing our present form of family life?

7. What effect does eating away from home have upon family life?

8. Make a collection of magazine and newspaper articles on the home and family and report them to the class.

9. In what ways can the family members promote happiness in the home?

Books for Class Reference

Abel, M. H. "Successful Family Life on a Moderate Income." J. B. Lippincott Co.

Bomar, W. Social Aspects of Homemaking. J. B. Lippincott Co.

Kinne, Helen, and Cooley, A. M. "Shelter and Clothing." The Macmillan Co.

Spencer, A. G. The Family and its Members. J. B. Lippincott Co.

Starrett, H. E. "The Charm of the Well-Mannered Home." J. B. Lippincott Co.

Starrett, H. E. "The Charm of Fine Manners." J. B. Lippincott Co.

UNIT TWO

THE FAMILY INCOME AND ITS EXPENDITURE

Introductory Studies.—1. List the sources of income in your family.

2. What contributions does each member of your family make to the family income? What other contributions are made that are not expressed as money?

3. List three ways of handling family finances.

4. Are children assets or liabilities in respect to the family money income?

Presentation of the Unit.—One of the most important activities of the home is expending the family income. If you were to make a list of all the expenditures for your family during the past week, you would no doubt be much surprised at the length of the list. Some of the money bought necessities, some bought comforts and luxuries, some brought pleasure and happiness, some was wasted entirely.

If the expenditure was out of proportion to the value received, or if it merely gratified a passing whim or fancy, you may be sure the money was not well spent. If a purchase was made at the expense of some really vital need of other members of the family, an injustice was done which will work havoc upon the unity and well-being of the group.

Through the expenditure of the family income the members are furnished with the satisfactions of life. What are the satisfactions that your family desires? A home, an automobile, a radio, membership in some lodge, opportunity to go to college—the list grows long if you include all the things that all the members of your family wish. Out of the lengthy list, only a limited number can be had, and these the family must choose carefully.

What determines this choice? Perhaps the family's past standards, or accustomed ways of living, play the largest part. In every home provision must be made for food, shelter, and clothing, but the distribution among these items varies widely. Have you ever known a home where there was always fresh fruit out of season, candy, and an abundance of food luxuries provided as a matter of course, but where silk stockings and fine clothes were regarded as luxuries? Or have you known of a family whose standards of dress were so high that little of the income was left for food? It is important that a family examine its standards to insure that they are well balanced and wholesome.

Next in importance to family standards in determining choices are personal tastes and ideals. Few families can afford both bi-weekly attendance at the moving picture show and tickets to the best musical concerts. Few families can afford books and magazines and also unlimited patronage of soda fountains and candy booths. In each case the choice will depend on the family's tastes and ideals.

Another important factor in the choice is the family spirit or bond of spiritual unity. If the feeling of unity is strong in the family, there will be a desire to choose so that the whole group may share in the satisfactions. If there is no family spirit, there will be a competition between members for decisions that favor one individual or another. Have you ever seen a girl sulking and pouting to secure a purchase that would give satisfaction only to her? If each member of a family proceeds on such a basis of selfishness, there is little chance of wise choices in family expenditures. Fortunate indeed is the family that is able to secure satisfaction in associations and personal contacts both in the home and community without interpreting happiness in terms of "things" that its members must have. Both the individual

and the family that seek satisfaction through spending money to out-do others will fail to find lasting happiness. Vulgar display is a poor basis for family expenditure.

How are your family expenditures met? It is commonly thought that in most homes the expenses of the family are met from the money the father receives for his work. Sometimes, in addition to the father's earnings, there is an income from investments, or use of property. Again the father's earnings may be supplemented by supplies produced in the home. This is frequently done through raising vegetables and poultry. In a narrow sense the money that comes into the family for its use is termed the family income, and by it family expenses are met. This, however, is not the complete picture. The mother who conserves the income and contributes labor and management is adding just as much to the family as the father who makes his contribution in money.

That the happiness of the family is influenced very much by financial problems has long been recognized. There is an old adage which reads, "Love goes out at the window, when poverty comes in at the door." This does not mean that money and the things money will buy bring happiness; it does mean that a family which is continually harassed by financial problems is in danger of being wrecked. Many homes have suffered because certain members made unreasonable demands upon the ones who were earning the income.

The responsibility for the family expenditures belongs to each member. No one member can solve the problem. Each one should be willing to coöperate and to make the needed sacrifices in order that the family as a whole may receive the largest benefit and happiness. Only by wise expenditure upon the part of all members can the family income be made to furnish the most for the family.

PROBLEM 1—HOW CAN THE FAMILY INCOME BE MADE TO COVER THE REGULAR FAMILY EXPENSES?

Every family has certain expenses which must be met regularly. These include necessities, comforts, and frequently luxuries. Most families have a limited income with which to meet these expenses. There is a great tendency to allow the expenditures to exceed the income. If you have read your Dickens and chuckled over Micawber's advice to David Copperfield, you will recall the manner in which he stressed the evils of this practice. "Annual income 20 pounds, annual expenditure 19 pounds, 19 shillings, sixpence, result, happiness. Annual income 20 pounds, annual expenditure 20 pounds, naught and sixpence, result, misery."

The standard of living should be in keeping with the income. What is meant by standard of living? There are certain satisfactions that individuals desire so greatly that they will give up almost everything else to obtain them. If the satisfactions so eagerly sought represent a large outlay of money, the person is said to have a high standard of living.

The American people are said to have a higher standard of living than any other people. They are unwilling to do without the luxuries and comforts that are unknown to many people of other countries. Although a high standard of living is much to be desired, it should never be forgotten that the family standards must be in keeping with the income and must not exceed it. Each family has its own standard of living. This is sometimes determined by the home life of the parents in their youth, by the interests and tastes of the family members, and by the standards set by neighbors and acquaintances.

Incomes are sometimes classed as existence, living, com-

fort, and luxury incomes. These terms are only relative however, for what may be a comfort or luxury to some families may be regarded as a necessity by others. Again, the luxuries of one generation become the necessities of the next. The family must make its own decision and determine whether it is trying to maintain a luxury standard on a living income. Many young married people when beginning their home make a grave mistake by trying to out-do their parents and friends, thus bringing unhappiness and failure to their family life.

The Family Expenditures Should Be Carefully Planned.—Many families give little attention to the planning of their expenditures. They purchase this article or that as their fancy dictates. They make few definite choices but buy heedlessly until their money is gone and then wonder why they cannot make their income purchase everything they wish. Careful planning of expenditures means better use of the income. No expenditure should be made without due consideration and thought. A plan for spending the income is called a budget. It will be successful if the entire family has a part in making it and agrees to follow it.

Sometimes you hear people make such comments: "I never make a budget for I only buy what we need," or, "The money all goes anyway, so why worry?" These remarks show unbusiness-like attitudes. Every family is confronted with the problem of getting the greatest possible satisfaction for the group from the income. There is nothing that is as significant to anyone as the opportunity for effective living. If spent carelessly, the income will go for many unnecessary and useless expenditures, and thus forfeit the well-being of the family. We all need to be reminded of Ellen H. Richards' statement—"There are many things, attractive in

themselves, for which money may be spent, that have no bearing on effective living."

Good Business Methods Should Be Employed.—Have you ever thought of the business methods that must be used to insure success in handling the affairs of large oil companies? With millions and millions of dollars back of its company, the small oil station in an obscure village must give careful accounting for every quart of oil, every gallon of gasoline, and every penny of money. Its probable receipts have been determined and an investigation would result if they were markedly low. Thus a commercial concern of unlimited resources tries to secure profit for its stockholders.

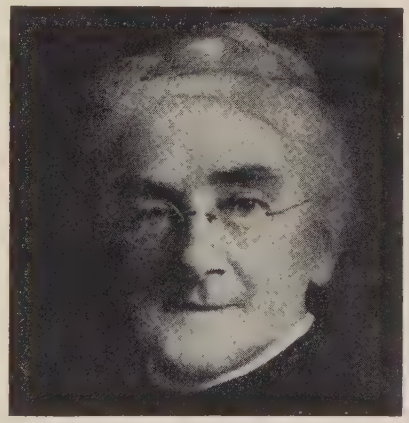

Fig. 9. Ellen H. Richards—1842–1911. Founder of American Home Economics Association.

The homes of America represent a much larger business. Their yearly expenditures amount to many billions of dollars. This money is expended, not for financial profit alone, but largely for the physical and mental development of members of the family, and for intangible satisfactions. Through this expenditure health, happiness, and security for the future are to be attained. There is no one to check, no inspector. The only safeguard for the family is in the use of business-like methods.

In the first place, the adoption of such methods should not be left to chance. Some plan for using the income must be decided upon early in the family life. The common purse, the doling method in which the wife asks the husband for

every cent she needs, the method in which certain members of the family are responsible for definite expenditures, the allowance plan, the common checking account, and the joint management plan are among the various means used. Of these, the joint management plan is the most business-like and just. In this the husband and wife are joint managers of the home. Careful plans are made for expenditures, and joint or separate bank accounts are opened. At the end of each month the husband and wife carefully check the receipts and expenditures.

What methods of purchasing do you regard as belonging to a good business plan? Generally speaking, cash purchases are best, for they result in a saving of money. As a rule personal marketing is more satisfactory than telephone marketing. Ordering by telephone often increases the amount ordered beyond the needs of the family. However, judgment must be used in this, for often the time used in going to market would cost more than the money saved.

Charge accounts are a convenient method of purchasing. What possible handicap do you see to such a practice? There is perhaps no method that so definitely encourages large unconsidered expenditures. Further, the credit store must charge more for its goods. Frequently the use of the account is not restricted to adult members of the family, nor to simply a few stores. There is no more certain means of bringing about financial disaster than by opening charge accounts where any member may make unconsidered purchases.

Do you know what is meant by *buying on the installment plan?* Installment buying is very popular now with certain groups of people, partly because of the skillful advertising and salesmanship used for its advancement, and partly because of the unwillingness of a large group of people to face

facts. A persuasive salesman can often convince a young woman that she cannot afford to wait to make a certain purchase when, if she were honest with herself, she would be forced to admit that she could not afford to buy at the present. The caustic caption "weekly payments for weakly minded" may serve as a subtle reminder when oily persuasion flows about one. Are we ever justified in using such an expensive and involved system of purchase? In the case of labor-saving devices which last a long time and which help pay for themselves in labor saved, this plan may be considered, but clothing and luxuries should never be purchased on the installment plan.

Intelligent Purchase and Use of Commodities Are Important.—Care and thought should be given to all purchases. Not only the immediate but the long-time use of the article should be considered. Purchases should be made only after checking the supplies on hand. Many times the temptation comes to buy an article because it is cheap or the price is good, when in actual use it may be worthless.

Some families are extravagant in the use of their purchases, and take little care of the things they buy. Extending the years of service rendered by a purchase means a direct extension of the family income. Frequently, such carelessness causes families to waste more than they save.

Increased Home Production Extends the Family Income.—There has been a tendency in the last generation to take many productive activities out of the home. Although this has freed more time for recreation it has resulted in an added drain upon the family income. If the income is inadequate to meet the expenses of the family certain forms of home production furnish means of extending the finances. Raising a garden and chickens, canning fruit and vegetables, and making clothes, are desirable methods and should be

practiced. The making over of garments for the various members of the family is an excellent means of reducing clothing expenditures. Each family must decide which plan is best adapted for its use and must make a conscious effort to maintain the best standard of living possible within its income.

Exercises.—A. Plan your own expenditures for one month. Indicate the advantages gained.

B. Plan the expenditure of your family for one week. Compare this plan with the actual expenditure.

C. Show by actual figures how canning fruit, making gardens, or making over garments extends the family income.

D. Mr. and Mrs. A have an income of $125 per month. They have two children, two and four years of age, and are paying for their home. They find that very often they have spent the entire salary at least a week before the month is gone and yet have not met all of the regular family expenses. What can they do to make their income more nearly meet their expenses?

PROBLEM 2.—WHY SHOULD EVERY FAMILY KEEP A HOUSEHOLD ACCOUNT?

Have you ever seen a baby drink the last drop of milk from a cup, and then coo "Gone—all gone," looking in amazement at the emptied cup? Sometimes we chuckle in grown-up tolerance at the failure of the child to understand just what has happened. He had milk; he drank it; it is gone.

Many housewives react in a similar manner. They have the family income; they spend it; it is gone! Their amazement at the emptied purse is identical with that which the baby expresses when he peers into the cup and repeats—"Gone, all gone." The explanation of the emptied purse presents no more serious problem to the reasoning person than does that of the emptied cup. However a person who will not accept the responsibilities of an adult, insisting on

remaining infantile, always will find no explanation except, "All gone."

How could a reasoning person, ready to accept responsibility, determine whether the family income was being well spent? The best means is that used in business—the keeping of accounts.

The Household Account Gives a Record of All Money Received and Paid Out.—If you were to make a monthly account for your home you would place in one column all the money received by the family for that period of time. In most families the number of items in this column would not be many. In another column you would list all the expenditures of the family for the month. This list would be long. It would include everything from tooth-brushes to potatoes. From such a list the family could readily see how the income was spent. Business houses use just such a record to make their business profitable.

The home is an important business enterprise, and it is a poor plan to keep no check on its expenditures.

The Household Account Is a Means of Comparing the Expenditures for the Various Items.—Very early the family members learn that the income yields limited returns. The same money can be spent but once. If an undue amount has been spent for certain desires, needs will be crowded out. The household account furnishes a means of comparing and studying expenditures. Families are often astonished to find that their clothing expenses are all out of proportion to those for health or recreation.

The Household Account Is a Means of Detecting Waste and Needless Expenditure.—Few families really wish to be wasteful or to spend their money foolishly, but often purchases made on the spur of the moment without much thought, result in poor returns. A record provides a means

for discovering waste and determining which items are necessary. Frequently the food account is too high, or the operating expenses have absorbed the savings account. Only by studying the record can these things be definitely known and remedied. The household account is invaluable in this regard.

Household Accounts Form the Basis for Better Planning of Expenditures.—Only as household accounts are used as a basis for future planning do they have their greatest permanent value. Last year's expenditures should form a basis for this year's plans. Each year's experience should contribute to wiser spending the next year. The year's expenditures should be studied and analyzed in order to eliminate unnecessary items and to determine which ones have brought the greatest satisfactions. Through household accounts we should be able to plan our spending so as to get the most satisfactions possible for our money. A budget which has been made after a study of previous expenditures is much more workable than one based upon theory and imagination.

The Household Account Sometimes Aids in Disposing of Property.—Very frequently an accurate account aids in selling or renting property. Questions concerning the cost of the fuel used to heat the dwelling, the repair cost for the year, or the rent from the property, can be readily answered by accurate accounts. Such items may influence a purchaser in his choice of property.

A Good Method of Keeping Accounts Is a Necessity.—Many people fail in their attempts to keep accounts because their methods are poor. While every person may have his own particular method, certain information should be recorded. There should be a separate account for each of

the most important expenditures. The account should show the date and amount spent each week, month, or year for each particular item. It should show how much is owed and how much is on hand. Often people labor and worry over balancing the accounts to the last penny when the real value does not come from such exactness. Paying as many bills by check as possible and keeping a reasonably accurate account of petty cash expenditures will eliminate such difficulties. Some prefer a ledger account book and others prefer a card system. A number of very good account books may be obtained now at a small cost. A regular, definite time for recording and totaling the accounts will prevent the work from becoming a burden.

The number of headings for accounts will vary. Some families wish to make a careful study of certain expenditures. As a rule, it is well to limit the number of headings.

The Family Members Should Keep Personal Accounts.—In addition to the household account the members of the family should keep personal accounts. It is desirable that the individual understand the importance of well-balanced personal expenditures. Too often the satisfaction of immediate personal desires outweighs all other matters. Children should be given an allowance. The amount will depend upon their age and needs, but it should represent to them a return in some way for certain services which they render to the family. There are, of course, many services for which no pay should be offered or expected, but such work as Saturday cleaning or the care of the furnace is typical of allowance tasks. If the family income does not make an allowance possible, the children should have an opportunity to earn money which they may have as "personal allowance." The allowance should be made for certain

General Account

General Account

DATE	ITEMIZATION	INCOME			EXPENDITURES									Cash on Hand
		Earnings	Gifts and Allowance	Total	Savings	Food	Clothes	Education	Pleasure	Gifts and Donations	Car Fare	Misc.	Total	
Sept.	Balance Forward .75													.75
2	Ice Cream .06 Paper .10 C. F. .12 Save .10		1.00	1.00	.10	.06		.10			.12		.38	1.37
4	Lunch .10 Books 2.50 C. F. .06		2.50	2.50		.10		2.50			.06		2.66	1.21
5	Candy .05					.05							.05	1.16
6	Acc't. Books .10 C. F. .12							.10			.12		.22	.94
8	Sunday School .10									.10			.10	.84
9	Lunch .15 Save .10	.50	1.00	1.50	.10	.15							.25	2.09
11	Pencil .05							.05					.05	2.04
12	Tie .35						.35						.35	1.69
14	Movie .25								.25				.25	1.44
15	Sunday School .10									.10			.10	1.34
16	Ice Cream .06 Save .10 C. F. .06		1.00	1.00	.10	.06					.06		.22	2.12
17	Lab. Fee .50		.50	.50				.50					.50	2.12
18	Club Dues .25								.25				.25	1.87
19	Gift For Sister .35	.50		.50						.35			.35	2.02
20	Ball Game .25 Lunch .10 C. F. .18					.10			.25		.18		.53	1.49
20	C. C. C. Dues .01 Pattern .25						.25	.01					.26	1.23
22	Sunday School .10									.10			.10	1.13
23	Savings .10		1.00	1.00	.10								.10	2.03
25	Car Fare .06										.06		.06	1.97
27	Thread .05						.05						.05	1.92
28	Hair cut .25											.25	.25	1.67
29	Sunday School .10									.10			.10	1.57
30	Gift From Uncle		2.00	2.00										3.57
	Totals	1.00	9.00	10.00	.40	.52	.65	3.26	.75	.75	.60	.25	7.18	XXXX
	Forward													3.57

FIG. 10. A good account book always pays. From Personal Account Book by Kelley, Higbee and Stevens. Courtesy of Webb Publishing Co.

types of expenditures so that children may learn early the value of money.

Exercises.—A. Keep your personal account for a month. Compare your expenditures for various items.

B. Plan a method for keeping household accounts.

C. Make a list of the expenditures which the allowance of a twelve-year-old child should cover if he receives $2.00 a month; $5.00 a month.

D. Mr. and Mrs. B think they have been spending their income unwisely. They have been unable to afford a vacation for several years and have saved very little although two of their friends receiving the same salary have made substantial savings. Mrs. B thinks that Mr. B belongs to too many clubs; Mr. B thinks that Mrs. B is extravagant in clothing purchases. What plan will you suggest for Mr. and Mrs B that will enable them to analyze their expenditures? How will your plan do this?

PROBLEM 3.—HOW SHALL WE DETERMINE THE PROPORTION OF THE INCOME THAT SHOULD BE SPENT FOR THE VARIOUS ITEMS?

In planning the budget five divisions are usually made. Expenditures are grouped under food, shelter, clothing, operating expenses, and advancement. Through careful study and observation certain percentages of the income have been suggested as guides for apportioning expenditures. These percentages vary with the different incomes and the size of the families. Each family must make a study of its problem and adjust the proportion used for different items in accordance with the best interests of its members. That is, while standard or average budgets represent the usual practice, each family must find by experience, by keeping accounts and basing its budget estimates upon them, just what its own best budget is.

The first step in apportioning is to determine the amount of the income. The next step is to deduct the income tax.

Some people also advise deducting the amount to be saved at this time. Then the balance is apportioned between the five different groups to show what can be spent for each.

The Proportion of the Income Spent for Food Varies.— The percentage usually suggested for food is 25 per cent. This holds true only with certain incomes. As the income

Fig. 11. Where your dollar goes.

increases the per cent spent for food decreases. In a large income the percentage may fall as low as twenty to ten per cent. In such cases the actual amount spent for food may be increasing as the income gets larger even though the percentage for food is decreasing. In the case of a small income the food percentage may be as large as forty-five or fifty per cent, and sometimes, though rarely, even more.

The expenditures for food must supply the kinds and quantities of food required for the family, and yet must be in keeping with the family income. Well-balanced, attractive, appetizing meals should be possible for every family. Sufficient milk, eggs, meat, butter, vegetables, and fruit are essentials that should be provided. If the income is small, cereals and breadstuffs will have to be used rather liberally but still some of all these essential foods must be had for health. If the income is larger, more meat will be used.

In determining the proportion of your income which you can safely spend for food, first make the necessary deduction for taxes, then set aside twenty-five per cent of the remaining "spending income" as a tentative food budget. Divide this amount by 12 and the result by four and see how nearly you can make these sums cover the monthly and the weekly food needs. Also divide the monthly food allowance by thirty to get the daily food allowance and divide this by the number in the family to see what is your daily food cost per person. Although the cost of adequate food varies in families with different localities and with other factors, the minimum cost is sometimes estimated at thirty-five to forty cents and a liberal cost at sixty cents per day per person. Various authorities suggest the following rule for dividing one's weekly or monthly food bill on a modest income: one-fifth, more or less, for fruit and vegetables combined; one-fifth for milk and cheese; one-fifth for meat, eggs, and fish; one-fifth for bread and cereals; and one-fifth for sugar, fats, and other groceries.

On a liberal income, fruits and vegetables combined will cost more than a fifth of the food money, as will the meat, eggs, and fish group.

The most important rules to be observed are:

1. Use fresh fruits and vegetables liberally, especially leafy vegetables.

2. Use whole grain cereals, breadstuffs, and potatoes to meet the energy requirement of the body.

3. Use milk in some way in every meal. The common rule is, allow one quart of milk for each child up to sixteen years and a pint or more for each person over this age. Sometimes it is impossible to secure milk in such quantities. Sometimes the price of milk is so high that the provision of a quart of milk per day each for a family of five would use approximately half of the food budget. Obviously in the latter case such an expenditure for milk would not safeguard the family's health. When such conditions exist, at least a pint of milk per day per person should be used and the mineral requirement of the body should be protected by a liberal use of vegetables.

If the twenty-five per cent of the spending income will not furnish adequate food, further planning and study must be made. The amounts to be spent for shelter and operating expenses will probably have to be reduced first. The food supply can also be supplemented, where possible, by home production such as gardening, canning, and raising poultry in order to reduce food cost. Less expensive foods should be substituted for the more expensive. For example, tomatoes in season and cabbage are valuable substitutes for oranges and lettuce. All waste should be avoided and seasonable foods used entirely. Inexpensive cuts of meat if properly prepared are just as nutritious and palatable as the more expensive cuts. Providing adequate food for its members is an important responsibility of the family.

The Proportion of the Income Spent for Clothing Remains More Constant.—The suggested percentage for clothing is about fifteen per cent but the indications are that many

families are far exceeding this amount. Careful study of the budgets of families and individuals with average incomes shows that clothing expenditures which exceed fifteen per cent are made at the expense of other divisions of the budget. Few families can afford to continue such practice. Careful selection of clothing, garment construction in the home, remodeling and making-over garments, pressing, and careful use of clothing, all aid much in keeping within the clothing allotment. Children should be taught early the practice of economy in clothing and should take pride in a saving made in this item.

The clothing expenditures should be planned for a two or three year period since many garments are worn longer than one season. Coats, suits, and dresses are frequently worn for three years, but hose, shoes, and underwear must be purchased more often.

It is a good practice to list garments which will last several seasons, making a tentative yearly allotment for such expenditures. This allotment should be so planned that new coats need not be purchased for several members of the family in any one season. It is also essential that a definite amount be planned for the purchase of those garments which wear a shorter length of time, such as shoes, hose, and undergarments, and that the members of the family coöperate to keep the expenditures for these items within the set amount. It is very easy to have a disproportionate expenditure for clothing.

The Proportion of the Income Spent for Shelter Has Certain Limits.—Practically all authorities agree that the amount spent for shelter should not exceed twenty per cent of the income. When the shelter cost goes beyond this amount, as it tends to in large cities, the food, the advancement, and other needs of the family will have to be inade-

quately met. The family desires, in choosing its house or apartment, certain comforts and conveniences, but often a choice must be made in favor of a less desirable home to provide for other important items of the budget. Sometimes the cost of housing represents in part the selection of a desirable neighborhood in which to live to secure social and educational advantages; in this case a higher cost may be justified. But many pay more for their shelter than they can afford.

The Proportion of the Income Spent for Operating Expenses Should Be Reduced to the Minimum.—Have you ever felt irritated when your mother requested you to "turn off the light" as you left a room? Perhaps the loss of a little electricity seemed a small thing, yet here is a habit of economy which saves money for more valuable uses. There are in the home many services and supplies, small in themselves, that total a surprising sum. In order that the home may operate easily and furnish the family with comfort, heat, light, water, telephone, and possibly hired service, all must be available. Equipment must be repaired and replaced and sundry household supplies must be furnished. These items are legitimate and necessary expenses in the operation of a home. Because they are many, and because all members of the family have a part in their use, their cost tends to be great. When the cost of operating rises above fifteen to twenty per cent, there is reason to believe that the family is paying not only for comforts, but also for luxuries.

Would you choose to have the money that might go for recreation or saving spent for water running from a faucet left unturned, for a light burning all night in the basement, or for gas heating an unused burner while you telephone? It is in these expenditures that the greatest leaks and losses in operating expenses often occur. Money spent without

due return in satisfaction is money wasted. Operating expenses should be controlled so that this waste will be eliminated. The whole family should coöperate in this effort. Some families make a game of learning habits of economy—"a penny fine for every light left burning—and the fine fund to go for family fun!"

The Proportion of the Income Spent for Advancement Varies.—Advancement includes savings, recreation, education, health, travel, club membership, church obligations, and similar expenditures which contribute to the well-rounded life of the family. Twenty to twenty-five per cent and upward of the income is considered desirable for advancement, but this, too, depends upon the amount of the income. The larger the income, the larger the per cent for advancement. If savings are not deducted from the income before making the budget, they should be planned for in the advancement.

It is often said that at least ten per cent of the income should be saved if a family's finances are to be established on a safe basis. This covers life insurance, savings, investment, and home purchase. Of course, there are families whose incomes are too low to permit such a saving without endangering the well-being of the family, but all families should make a conscious effort to save. As the income increases, the savings will naturally expand.

When the planned expenditures are greater than the income, expenditures for clothing, shelter, and operating expenses should be reduced before cutting down on the plans for advancement. We must not forget that provision should be made for the spiritual, mental, and social life of the family. Advancement is a most important part of the budget and too frequently it is forgotten or neglected. Many times undue expenditures for food, clothing and

other items leave little for the development of the personal life and social satisfactions of the family.

The following division of the income at various levels has been suggested by Dr. B. R. Andrews, of Columbia University.

Approximately Percentage Budgets for Different Incomes

Income	Food	Shelter	Clothing	House-keeping or Operating	Advancement	
					Personal	Savings and Insurance
Minimum standard $1,200–$1,500	40–45%	16–17%	12–13%	10%	11–15%	1–3%
Comfort standard $1,800–$2,200	35–40	18	13–15	12	16–20	2–4
Moderate standard $2,500–$5,000	30	18	15–17	14	18–22	3–6
Liberal standard $6,000–$20,000	20–25	20	17–18	15	25	6–15
Super-Liberal $25,000 upward	15–20	20	18–20	20	25	10–25

Exercises.—A. Plan the food expenditures for a month for a family of five, including three school children, whose allowance for food is $45.00; for one whose food allowance is $60.00.

B. Make an itemized account of the operating expenses in your home for one month. What is the total cost to your family? How could this expense be reduced?

C. Determine the amount of your allowance for clothing for one year. Plan your clothing budget for three years, based on this amount.

PROBLEM 4.—HOW DO UNBALANCED OR UNJUSTIFIED EXPENDITURES AFFECT FAMILY LIFE?

Unbalanced Expenditures Are Hazardous to the Family.—As you have studied the suggested distribution of various

incomes into the chief divisions of the budget, you have seen that spending too much on any one group is sure to impoverish another. Have you thought of the probable effect of this upon the family? The family health depends upon securing proper food, shelter, and clothing. Health cannot be maintained unless the expenditures are so balanced as to meet these needs. Girls who go without proper food in order to have a marcel or silk underwear are often products of homes of unbalanced expenditures. Such practices are equally bad for the home and the individual.

In addition to the health hazard, family effectiveness is often lessened by disproportionate expenditures. The family that keeps an expensive car, or entertains lavishly on funds that should be saved for college education for the children, is hampering its effectiveness. The family that lives from day to day or month to month and makes no provision for the "rainy day" is hampering its effectiveness.

Disproportionate Expenditures for Different Members of the Family Are Unfair and Unwholesome.—In many families one or more members frequently demand more than their share of the income. Whether this is done thoughtlessly or intentionally friction and discontent usually result. A person who spends more than her share is selfish and unjust, to say the least. A group of girls in a Kansas high school made a study to see if the expenditures of their families were fair to all members. Every girl discovered that more than her share was being spent for her. Whom do you suppose was being deprived of his share? In every case the mother and younger children were doing without necessities to permit the high-school girl to have the comforts and luxuries that she desired. Who was at fault?

Unbalanced expenditures may have a serious effect upon the home by preventing a happy family spirit. A

sense of fairness is the basis of all satisfactory human relationships, and when this is violated unhappiness is certain to result. Many studies made with families show that a large proportion of family difficulties and unhappiness begins with unbalanced expenditures in some form.

Exercises.—A. Cite three examples of unbalanced expenditures which have bad effects upon family life.

B. For what other items than clothing are young people likely to secure more than their share of the family's funds?

C. Helen S, aged sixteen, buys a new coat every spring and fall. She wears silk underwear and chiffon hose. Helen's mother has not had a new coat for four years and was unable to attend the celebration of a friend's wedding anniversary because her dress was too shabby. Helen's mother wishes Helen to dress well because she says that Helen will be young only once. How will such practices affect their family life? How will they affect Helen's future?

D. Mr. and Mrs. Smith have four children who are under twelve years of age. They are very fond of "good things to eat," and Mrs. Smith spends much time in cooking and having friends dine with them. They do not go to entertainments nor subscribe for any magazines. They say they cannot afford these items. They have no music of any kind in their home but occasionally go to the picture show. What are the dangers of such family practices?

PROBLEM 5.—WHY SHOULD A FAMILY SAVE?

The word *save* has an unpleasant sound to some people. It conveys to them the idea of doing without all desirable things, so that money may be put in the bank. This is a very mistaken notion. Saving really means going without something in the present so that greater satisfaction may be secured later. Many people find it difficult to deny themselves present gratification in order to meet future needs. This character fault is largely responsible for the great number of dependents in the United States.

It is common knowledge that relatively few people become wealthy, and that the great mass of people accumulate almost nothing. The poorest of our people (sixty-five per

cent) are estimated to own about five per cent of the property in the country; the richest (two per cent) own about fifty-seven per cent of the property; the remaining one-third of our people, or the middle class, own the balance of about thirty-eight per cent of national wealth. This last group can afford the necessities and comforts of life. Inclusion within this group is greatly to be desired by the wage earner and his family. Only as the family has a sound economic basis can it be safeguarded from the disasters so often accompanying illness and death.

What is the financial condition of the women who are widowed? According to tables prepared by life insurance companies, of one-hundred widows, eighteen live on their incomes, forty-seven supplement incomes by working, and thirty-five are dependent.

This indicates the great need of systematic saving. It is said that if young people start out saving ten per cent of their income they are making adequate provision for their future.

Savings Make Possible a Home for the Family.—Few couples when beginning their family life have sufficient means to purchase a home. Careful and systematic saving will make possible the owning of a home. Frequently families invest the accumulated savings in a payment on the home and continue their savings by making monthly payments until the home is paid for. Such a goal makes the interest in saving keen, and thus keeps the fund secure against unnecessary dispersion.

Savings Provide Adequate Care in Time of Illness.—There are few families that do not have illness at some time. It may be the father, mother, or children, and is not infrequently the entire family. The family which has made no provision for such a time is in a serious situation. How

many families in your neighborhood have had hospital bills in the past year? What is the average cost for hospital care of a mother and her new baby? What does it cost to have tonsils and adenoids removed? What is the average surgeon's fee and hospital bill for appendicitis? In each of these cases the cost is too great to be met from the monthly salary check. Through savings it is possible to have proper care at such a time. It is much better to be protected with a savings account than to spend years paying for such expenses after they have been incurred. Many families set aside a definite sum each month for such emergencies.

Savings Secure Education for the Children.—The demand for education for the children is greater today than ever before. Parents are eager to give their children the best possible start in life and believe that a good education supplies this. It is customary now for parents to start savings accounts for the education of their children when the children are very young. The children themselves add to it, whenever they have money to save.

Savings Protect Against Financial Reverses.—No family is free from the possibility of financial reverses. Accidents, business depression, unemployment, and similar misfortunes may come to all. Savings have proved the safeguard of many a family in such an emergency. It is generally conceded that families with incomes below $2,000 should have at least the equivalent of one year's income in savings for protection from reverses. What savings for protection should families with incomes of $3000 have? With incomes of $5000? What would you suggest as a minimum for any family?

Savings Insure Comfort for Old Age.—Every person may reach the period when his earning capacity begins to decrease and the later period when it is gone entirely. The

individual or family which has made no provision for old age is in a sad position. Old age needs protection and many comforts that youth can do without. It is humiliating to be dependent upon other people for support. Usually a person who has means to pay his way to some extent is happier and is much more welcome wherever he goes. Savings will help insure adequate provision and self-respect for old age.

Exercises.—A. What amount would be necessary to provide the monthly minimum living expenses for a woman of sixty who is unable to work?

B. How may provision for this amount be made? Consult your banker and write a theme explaining the means that you consider most satisfactory.

C. Mr. T was a large, strong man who earned a good salary. He and his family enjoyed a good time and spent all that he made. When Mr. T was about fifty years old he became ill and had to undergo an operation which resulted in a heavy hospital expense. He has never been able to resume his work. He and his wife are now dependent on their children who were just beginning to establish their own homes. What will be the effect on Mr. T? On his wife? On the children? How might this situation be avoided?

PROBLEM 6.—HOW CAN THE FAMILY SAVINGS BE INVESTED?

Savings should be invested to yield returns to the family by increasing the amount of income. The old custom of hiding the savings in the chimney or mattress was unsafe and unproductive. Money should be kept invested. There are many opportunities for investments, but before deciding, advice should be obtained from some reliable source. Get-rich-quick schemes which provide extremely high rates of interest should be avoided.

Savings May Be Invested in a Home or Other Real Estate.—Real estate and real estate mortgages are usually among the best investments. They may yield small returns, but they are safe. The locality and business conditions

should be carefully considered, for sometimes real estate falls so much in value as to be an actual loss to the owner. Savings may be wisely invested in a home providing the cost of the home is not beyond the income of the owner. The building and loan associations have aided much in making investments in homes possible.

Life Insurance Is a Safe Investment.—No matter how small a per cent of the family income goes into savings, some part of it should be invested in insurance. However, insurance should not be considered primarily as an investment.

This Table Shows How Much To Save Each Month At Your Age To Reach Your Goal, With Interest At 4% Compounded Semi-Annually

Amount You Want at Age 65	YOUR PRESENT AGE												
	20	22	24	26	28	30	32	34	36	38	40	45	50
$5,000	$3.33	$3.66	$4.04	$4.46	$4.94	$5.49	$6.11	$6.82	$7.64	$ 8.60	$ 9.73	$13.63	$20.30
10,000	6.66	7.33	8.09	8.93	9.89	10.98	12.22	13.65	15.29	17.21	19.47	27.27	40.60
15,000	10.00	11.00	12.13	13.40	14.84	16.47	18.33	20.47	22.94	25.82	29.21	40.91	60.91
20,000	13.33	14.67	16.18	17.87	19.79	21.96	24.45	27.30	30.59	34.43	38.95	54.54	81.21
25,000	16.66	18.34	20.22	22.34	24.74	27.46	30.56	34.12	33.24	43.04	48.69	68.18	101.52
30,000	20.00	22.01	24.27	26.81	29.69	32.95	36.67	40.95	45.89	51.65	58.43	81.82	121.82
40,000	26.66	29.34	32.36	35.75	39.58	43.93	48.90	54.60	61.19	68.87	77.91	109.09	162.43
50,000	33.33	36.68	40.45	44.69	49.48	54.92	61.13	68.25	76.49	86.09	97.39	136.37	203.04

FIG. 12. How much money will you have when you are 65? Courtesy of Bankers Thrift Corporation, Chicago.

The father of the family should carry enough insurance so that his family will be taken care of in the event of his death, but he should procure a policy with a low premium payable over a long period of years: this leaves more of his money free to put into better-paying investments.

There are many classes of insurance and types of policies. Accident, health, burial, and endowment policies are some of the additions to the regular type of policy. The rates vary according to ages, and are much lower for young people. Information concerning a company can always be obtained from the state insurance office.

Carefully Chosen Stocks and Bonds Offer Satisfactory Investments.—Many people prefer to invest their saving in stocks and bonds because the interest yield is often greater than in other investments. Government bonds are always safe but pay only a comparatively low rate of interest. The fact that these bonds are non-taxable increases the value of their return. For the average persons, bonds are considered a wiser investment than stocks. Stocks should not be bought unless the investor can afford to lose his income and to risk his principal. Investments of this

This Table Shows How Small Sums Saved Weekly Will Obtain It, With 3% Interest Compounded Semi-Annually

AMOUNT YOU WANT AT AGE 18	AGE OF CHILD													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
$500	$0.44	$0.47	$0.51	$0.55	$0.61	$0.67	$0.74	$0.83	$0.93	$1.06	$1.24	$1.47	$1.79	$2.27
1,000	.87	.94	1.02	1.11	1.21	1.34	1.48	1.65	1.87	2.13	2.47	2.93	3.57	4.53
1,500	1.31	1.41	1.53	1.66	1.82	2.00	2.22	2.48	2.80	3.20	3.71	4.40	5.36	6.80
2,000	1.74	1.88	2.04	2.22	2.43	2.67	2.96	3.31	3.73	4.26	4.95	5.86	7.14	9.07
2,500	2.18	2.35	2.55	2.77	3.03	3.34	3.70	4.13	4.66	5.33	6.19	7.33	8.93	11.33
3,000	2.61	2.82	3.05	3.33	3.64	4.01	4.44	4.96	5.60	6.40	7.42	8.79	10.72	13.60
4,000	3.48	3.76	4.07	4.43	4.85	5.34	5.92	6.61	7.46	8.53	9.90	11.73	14.29	18.13
5,000	4.35	4.70	5.09	5.54	6.07	6.68	7.40	8.27	9.33	10.66	12.37	14.66	17.86	22.67

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Fig. 13. Will your child have enough money at 18 to go to college or start in business? Courtesy of Bankers Thrift Corporation, Chicago.

nature should be made only upon the advice of competent authorities.

Savings Accounts at the Bank Are Recommended.—A savings account is desirable for the family and also for each member. It makes the collection of small amounts of money possible and encourages thrift. It pays a small rate of interest while the account is growing to sufficient size to enable a more permanent investment yielding higher returns. Saving is a habit which should be started in youth. The purpose of saving is well expressed by Bolton Hall, "Life is not made for saving but savings are made that life may be more abundant."

Exercises.—A. Make a list of good investments in your community for saving and state the reasons for your selection.

B. Outline a plan whereby a family may make systematic savings.

C. Mr. and Mrs. H have been married four years and have saved $800. How shall they invest this amount? State your reasons for your plan.

D. Class debate. Resolved, that health insurance of the father is essential for family financial security.

E. Filling in the correct word would make these statements complete. Can you do this?

1. The standard of living should be within the ———— of the family.

2. The standard of living of the family is determined by ————, ————, ————, and ————————.

3. The happiness of the family is greatly influenced by ————.

4. As a rule, ———— marketing is the most satisfactory.

5. Installment buying is justifiable in the case of purchasing ———.

6. Keeping household accounts is desirable because they are a means of ————, ————, ———— and ————.

7. Lack of success in keeping household accounts is frequently due to ————.

8. In planning a budget the divisions usually made are ————, ————, ————, ———— and ————.

9. Undue expenditures for food and other items too often crowd out the ———— of the family.

10. As a rule, the clothing expenditures of individuals and families with average incomes should not exceed ————.

11. ————, ————, and ———— are practices which help a family to stay within the amount allowed for clothing.

12. When the operating expenses extend beyond ————, the family is paying for more than comforts.

13. A family member who spends more than his share is ————.

14. Savings are a means of providing ————, ————, ————, ————, and ————.

15. When making investments, the advice of ———— persons should be secured.

16. Each member has a ———— for the family expenditures.

17. All family expenditures have a definite ———— to each other.

18. The family income consists of ————, ————, ————, ———— and ————.

19. The ———— of all the members of the family for saving is essential.

20. Careful planning of the expenditures is an important ———— of the family.

Additional Problems and Exercises.—1. Select a family with at least two children. Considering the occupation and probable income of the father, plan the expenditures of this family for one month. Plan the clothing expenditures for three years.

2. What conclusions as to the way to handle money may be drawn from the study of the finances of this family?

3. What plan or plans of spending the family income do you consider the most desirable? State your reasons.

4. How much allowance would you suggest for a seventh-grade girl; an eleventh-grade girl? Should it be given to her by the week or by the month? How will the plan differ in different families?

5. How does the addition of a child to the family affect the income and standard of living?

6. How much does the mother contribute to the family income?

7. What should parents do when children ask for additional money beyond their allowance?

8. Why is the cost of living so high today?

9. Plan the menus for one month for a family of six for $50. Make out the grocery list for one week; for one month.

10. Who must pay a United States income tax? Is there a state income tax in your state?

11. Make a study of your clothing expenditures and decide if you are spending more than your share.

12. Make a study of the operating expenditures of your family. List those which are necessities and those which are luxuries. Where could you economize?

13. Under which division of the budget will you list the dog tax? Is a dog a necessity or a luxury?

14. How much part should children have in planning the family expenditures?

15. What kind of a start in life should a young married couple expect to have?

16. What income do you consider sufficient for a couple to marry on?

17. What and how much should a girl have in her hope-chest?

18. To how many organizations can one afford to belong?

19. How much should a young man have in savings when he is married? How much should a young woman have in savings?

Books for Class Reference:

Andrews, B. R. Economics of Household. Macmillan Co.

Abel, M. H. "Successful Family Life on a Moderate Income." J. B. Lippincott Co.

Donham, S. A. "Spending the Family Income." Little, Brown & Co.
Matthews, M. L. "The House and Its Care." Little, Brown & Co.
Taber, C. W. and Wardall, R. A. "Economics of the Family." J. B. Lippincott Co.

Suggested Bulletins and Leaflets for Teacher and Student:

Black, D. and Zimmerman, C. C. "Family Living on Successful Minnesota Farms." Minn. Agri. Exp. Bul. 240, Minneapolis, Minn.
"A Budget for Little Girls," F 1–261. Woman's Home Companion, N. Y. C.
"The Family Budget." McCall's Magazine, N. Y. C.
"Family Finance and Budgets." Amer. Sch. Home Economics, Chicago, Ill.
Hodge, B. P. "Remodeling Clothing with Suggestions on Selection and Care." Ark. Agr. Ext. Cir. 246, Fayetteville, Arkansas.
"How to Use Your Bank." McCall's Magazine, N. Y. C.
"Income and Outgo: Why, When, and How Every Family Should Make a Budget." Woman's Home Companion, N. Y. C.
Kiethline, M. & McElmurry, L. "New Clothes from Old." So. Dak. Agr. Ext. Cir. 269, Brookings, S. D.
"Little Talks on Family Finance. How to Make a Family Survey. Systematic Spending for the Family. Making the Budget Work. How to Establish Family Credit. Financial Knowledge Every Family Should Know. Investing the Family Savings." Woman's Home Companion, N. Y. C.
Lord, I. E. "Family Budget: How to Make and How to Check It." McCall's Magazine, N. Y. C.
Lynn, G. "Home Accounts." Iowa Agr. Ext. H. E. Bul. 58, Ames, Iowa.
Rankin, J. O. "Cost of Feeding the Nebraska Family." Nebr. Agr. Exp. Bul. 219, Lincoln, Nebr.
"Suggested Budgets for an Average Home." McCall's Magazine, N. Y. C.
Woodhouse, C. G. "Planning and Recording Family Expenditures." Farmer's Bul. 1553, U. S. Dept. of Agr., Washington, D. C.
Woodhouse, C. G. "Planning Your Family Expenditures." Misc. Cir. 681–6, U. S. Dept. of Agr., Washington, D. C.

UNIT THREE

PLANNING AND FURNISHING THE HOME.

Introductory Studies.—1. Bring to class three pictures of houses you like. Tell why you like each.

2. Name three rooms in your home and state what family activities are carried on in each.

3. Select a house plan which you think is suitable for the needs of your family.

4. How much must be spent yearly on your home for insurance, taxes, and repairs? If you had to pay interest at 6 per cent on the money invested in your house, how much a year would that be?

Presentation of the Unit.—One of the strongest desires of every person is to have a home. Early in life, girls begin to dream and plan for the home which they hope to have some day. Choosing the house and the furnishings that shall make a setting for the family interests us all. The house furnishes the physical environment for the family, affording the members shelter, comfort, privacy, convenience, rest, and quiet. It also expresses taste and ideals. Whether planning or selecting a home, the family desires the best possible return for the amount to be spent. Too frequently we have felt that the home belongs to the father and mother, forgetting that the children also are a part of the family and should take a share in the house planning.

The selection of the furnishings and equipment for the house is an important responsibility. There are always many factors influencing our choices and decisions and it is necessary to think over all these matters in planning and furnishing the home. The ability to make good selection comes through studying the different materials and weighing all the values that enter into economy and selection. Frequently the difficulty lies not in a choice of a good article

of furniture, but in choosing one that can be afforded on the funds available. Many young people in beginning their home attempt to buy furnishings and equipment far beyond their income and in so doing bring financial difficulties upon themselves. It is better to start with less and then have the joy of adding to what you have as the income warrants. It is simply good judgment also to compare values both in houses for sale or to be built, and in the furniture offered in different stores so as to secure the best values when one is spending for something that must last perhaps all one's life.

PROBLEM 1.—WHAT ARE THE ESSENTIALS IN SHELTER?

The Essentials for Shelter Are Those Which Make Life Secure.—The shelter provided should make for the physical, moral, and mental safety of life. Plenty of air, light, and water, good drainage, clean streets, honest, friendly neighbors, and good moral conditions in one's neighborhood are necessary. Any shelter which undermines the health of the family, which brings about low moral standards and makes for personal difficulties or unhappiness, is not desirable. The house is the family's clothing, one might say, and has such an important influence on its occupants that shelter should be given careful consideration.

Shelter Should Furnish Proper Protection to the Family.—Do you remember reading of the great Mississippi flood? Again and again the newspapers stressed the fact that there were many thousands of people left homeless. The phrase "homeless" calls to our minds all the discomforts of being exposed to rain and wind without protection, of facing the night without a place to sleep, and of spending the day huddled with other people, seeking food doled out by relief organizations.

Homes should furnish us with protection from the weather, with quarters for rest and for living. By its roof our personal properties are safeguarded, and its doors secure us privacy and safety. It is important that the structure of the house make possible the physical security of the family.

Adequate Room Space is Essential.—One of the most important considerations in housing is room space. How many rooms do you regard as adequate space for a family of

Fig. 14. A bungalow may be made an attractive home.

five? Many families live crowded in one or two rooms with no chance for any privacy whatever. A woman much interested in housing conditions, referring to a group of people who were living in one poor room, said, "It is no wonder that their morals need patching."

Although economic and social conditions often prevent the building of the large homes characteristic of a generation ago in America, there should be sufficient room space provided for the family. Cooking, eating, sleeping, and living in one or two rooms does not make for wholesome character.

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Where there are boys and girls in a family three bedrooms are needed, one for parents, one for the brothers, and one for the sisters. At least one living-room not used for sleeping is necessary. Some authorities say that there should be at least as many rooms as there are members in the family, but each family's needs must be studied.

Good Sanitation Should Be Provided.—Good sanitary conditions are of course essential. In some communities little attention is paid to this and often the person renting or purchasing a home forgets to think of it. If buildings are too close, it will be impossible for air and light to reach the house; if the drainage is poor, the house is likely to be damp.

Running-water supply and indoor toilets should be had wherever possible. If an outdoor toilet must be used, it must be made sanitary. Screening against flies is usually the first step toward disease control. Ample provision should be made for the disposal of all wastes. Many epidemics and much ill health have been traced directly to unsanitary housing conditions.

A Good Neighborhood Is Desirable.—Some people consider a good neighborhood the greatest essential in shelter. We are so influenced by the people with whom we associate and near whom we live that this factor should be given attention. Thoughtful parents prefer bringing up their children in the wholesome influence of the church and the school. Many times the ideals of home may be completely destroyed by immoral influences of the neighborhood. What can a community do to improve conditions?

Exercises.—A. Make a comparison of the advantages of living in a house with those of living in an apartment.

B. What factors determine a family's choice of residence?

C. Make a floor plan of each story of your house, showing window locations. How many rooms have only one window? Do the sleeping

rooms have cross ventilation? Could this be provided by having one or more windows cut through walls?

D. In a certain city the buildings in a certain section were condemned by a number of civic organizations as "Unfit for Shelter." What did this mean? Why would the tenants not move out at once?

PROBLEM 2.—WHAT ARE THE FACTORS WHICH AFFECT THE EXPENDITURES FOR SHELTER?

Several items are included in shelter costs. Rent, interest on mortgage or building and loan payment, taxes, upkeep, depreciation, and insurance are part of the shelter expenses, and should be counted in planning the budget and expenditures. In addition, city families often include transportation to work with shelter costs, since transportation cost varies with location. You can live further out at cheaper rent but at higher travel cost.

Family Income Limits the Amount Spent for Shelter.—The amount spent for shelter should be in keeping with the income. Practically all families are limited in what they may spend for a home and the problem becomes one of getting the most desirable one for the amount of money available. It is regarded as unsafe to expend more than one-fifth of the yearly income for rent, although in large cities the amount will go higher. In purchasing a home there are similar limits in the cost to which the various incomes may safely go. If it is being purchased through a building and loan association the amount paid each month should not be greater than that suggested for rent. A family is rarely justified in investing more than twice its annual income in the purchase or building of a home. If one owns, it will take one-tenth or more of the cost of the house each year to pay for the taxes, insurance, repairs, depreciation, and the loss of interest on the money invested. Thus some families who own their homes set aside 6 per cent of the cost as a

way of saving—"pay themselves interest or rent" as they say.

The Number in the Family Affects Shelter Cost.—It is readily observed that the size of the family has much to do with the cost of the house. A large family requires more room than a small family. More bedrooms will be necessary, as well as larger sized dining- and living-rooms. When children are young the number of bedrooms may be smaller than when the children are grown. Little social life is desirable for young children but provisions for home entertaining are necessary for older children. If a family employs help, accommodations must often be made for the household employee in the home.

The Family Standard of Living Influences the Expenditures for Shelter.—Of two families on the same income, one desires a certain standard in shelter, while another family chooses a different type of house. Some people are not content without hardwood floors; others prefer a yard or garden with plenty of room. A family socially inclined may require larger space for entertaining than would be required by a family that enjoys reading or travel. The family's standard for shelter should always be based upon its own ideals and income rather than upon the standards set by the neighbors.

It is much better for a family to locate among families of similar financial status and social standards than to choose a house on the fringe of a group that spends on a larger scale. Great unhappiness may result from differences in standards and the attempt to live in the same manner as people of much larger means. On the other hand, persons of more liberal income but of worthy ideals, often live modestly and then make the best of neighbors for people with lower incomes. We all need to consider ways of attaining

the democratic ideals of equality and neighborliness without paying attention to financial differences.

Those who have larger means are under a social obligation to be reasonable in their own expenditures and to devote larger shares of their income to savings that will build up the community's and nation's working capital, thus providing work and increasing the capital resources that make possible better wages for all.

Exercises.—A. Make a list of the factors which determine the amount your family spends for shelter; compare this list with the factors which seem to determine the amount some other family spends.

B. Mr. Smith is a bookkeeper in a store down town. His family consists of wife, a two-year-old daughter, and himself. Mr. Jones is the superintendent of schools. His family consists of a wife, two daughters, fourteen and sixteen, and a son eight. What will influence the expenditures of each of these families for shelter?

PROBLEM 3.—IS IT MORE DESIRABLE TO RENT OR TO OWN THE HOME?

Home Ownership Presents Advantages and Disadvantages.—The family is confronted early with the question of whether to own or to rent the home. Home ownership has many advantages. It furnishes an excellent means of saving. It develops a strong feeling for home. It also gives a feeling of pride and self-respect in ownership and increases the sense of community responsibility. It discourages a nomadic tendency to move frequently and carelessly. The owner as a rule takes better care of property than does the renter. The owned home is a protection in unemployment and in old age. However, home ownership may be overly expensive, for insurance, taxes, repairs, and interest are likely to amount to more than rent. Frequently you hear that it costs much more to live in your own house than it would to live in a rented house. Ownership involves many

responsibilities and may prove a difficulty when a change of location is necessary. The closeness to transportation and to stores, the improvements made in the street and neighborhood, and the general type of neighborhood determine the value of the property. If there is no expectation that the property will increase in value it should not be purchased, if acceptable housing quarters can be secured otherwise.

Home Renting Presents Advantages and Disadvantages.—Many families prefer to rent their homes. They feel that the cost and responsibility are less. They wish to be free to move or change location as they choose; for example, with increase or decrease in family membership. Often families are not permanently settled in their business interests and find home ownership out of the question. Renting is then a very satisfactory way of providing shelter by means of monthly payments.

There is a danger that the renter may tend to become a hand-to-mouth citizen and make no plans for the future. The years may go by and he may have nothing to show for his money but a handful of cancelled checks. He is less likely to practice economy and to save than the man who is paying for his home. Frequently the renter has difficulty in securing the necessary repairs and desired changes.

Each Family Must Decide Its Own Case.—The problem of whether to rent or to own is an old one, and every family must make its own decision. The advantages and disadvantages of each should be carefully considered, and the choice made accordingly. Often it is better to rent for a time and then later begin the purchase of a home through monthly payments, as through a building and loan association or by a similar method. Starting payments into a building and loan association when first married, and thus

accumulating capital during the years while renting, makes later purchase easier.

Exercises.—A. List the reasons why your family prefers to rent or own your home.

B. What initial payment must be made in purchasing a home through the building and loan association? What relationship exists between the initial payment and the monthly payment?

Fig. 15. A remodeled house. Courtesy of *House Beautiful.*

C. How much per month is paid on each $100 or $200 owed to the building and loan association? Work out an actual example to illustrate this method of home purchase.

D. Give your solution of the following problems: 1. Mr. A has just been employed to teach in the high school in a distant city. He has a wife and two small children. Shall Mr. and Mrs. A buy a house or rent one?

2. Mr. C is a hardware merchant. He has been in business in D——— for three years and likes the town very well. His two children are in junior high school. The C family is trying to decide whether to continue renting or to buy property. What would you advise them to do? Why?

PROBLEM 4.—WHAT WILL INFLUENCE THE FAMILY IN CHOICE OF DWELLING?

Location Is an Important Factor.—After the family has decided the amount available for shelter, other factors become important considerations. The kind of neighbors, nearness to school and church, and distance from business and friends must be considered. Healthful conditions and transportation conveniences are most desirable. Many families find it is better to choose a dwelling farther out and thus have many comforts which would be impossible closer in.

Type, Size, and Appearance Affect Choice.—Some families are much concerned with the appearance of their home. They prefer to live in a house that "looks well" on the outside. While appearance should influence us in our choice it should not be the chief consideration. However, a house in a run-down condition, needing paint and repairs badly, is not desirable.

The type and size of house depend much upon the size of the family and the age of its members. A small family made up of adults may prefer a small house or an apartment. A larger family with growing children needs a real house with plenty of room. Some families prefer a one-story house, others a two-story. At the present time California and Dutch Colonial bungalows are popular, probably because of their compactness and convenience. Choosing a very large house because it may indicate wealth is vulgar.

The Convenience of the House as a Workshop Should Be Considered.—The convenience for the home-maker should be the first consideration. Too often the question of convenience is left until the last or forgotten entirely. The arrangement of the rooms, sinks, stairways, and closets

affects the value of the house as a workshop. The homemaker has many duties and many steps to take in the day, and her work should be made lighter by convenient arrangements. Houses for rent often show that little attention has been given to this matter.

FIG. 16. The Home Economics cottage at Utah Agricultural College. A desirable home for a family of the larger income group. Fred W. Hodgson, Architect.

In Purchasing or Building a Home Other Factors Should Be Considered.—Whether building or choosing a home, the exterior of the house should be given careful attention. It should be in keeping with the established principles of design. A pleasing, friendly appearance is a distinct asset.

Sometimes families remodel old houses. Before this is

done the house should be studied carefully and a definite estimate secured from a reliable builder to determine the exact cost and also whether the house is worth the expense.

It is a common mistake for families to make too large an investment in their home and in so doing to carry a great financial load. One cannot afford to own a home which one could not afford to rent.

Exercises.—A. What influenced your family in selecting your present dwelling?

B. Select a family of five, with the income which you judge to be an average one. Choose a dwelling in your community which would be desirable for this group.

C. The Brown family has five members—Mr. and Mrs. Brown, Robert, age seventeen, Margaret, age ten, and Mrs. Brown's mother, who is past fifty-five years of age. Mr. Brown has an income of $3,000 per year. He has a Ford car which he uses for his business needs. The Brown family is looking for a house. What will influence their choice?

D. Mr. and Mrs. T have three children: a girl ten, and two boys, seven and four. Mr. T is a mechanic in a garage and receives $35 per week. Mrs. T does all of her own work and makes all of the clothing for the children and herself. Their social activities are those connected with the church and occasional attendance at the picture show. What will the T family consider in choosing their dwelling?

PROBLEM 5.—WHAT FACTORS DETERMINE THE CHOICE OF HOUSE PLANS?

Has your family built a new home within the last few years? If they have, you will probably recall that numbers of books on house plans were studied and new houses eagerly visited before the floor plans took definite form. Perhaps the architect spent hours finding out all the things that the family desired.

What would be some of the things listed by the family as especially desired? The daughter might insist on a fireplace, the mother might desire ample closet room and satisfactory

laundry facilities, the father and son might emphasize the great need for a sleeping porch. As you see, none of these items actually need affect the fundamental structural lines of the building. Because of this fact most families who build choose a plan drawn by some reputable architect and revise it to include as far as possible their individual desires.

If your family has not built a house, but has rented a house or apartment, much the same effort to meet all the family needs has been made. It is probable that, in either building or renting, choices will have to be made since all the desired features cannot be included.

Let us list some of the things to which consideration should be given.

Consideration Should Be Given to Each Unit of the House.—The house is divided into three units: rest, work, and recreation. The rest unit includes the bedrooms and bath; the work unit includes the kitchen, pantry, and laundry; the recreation unit includes the dining-room, living-room, and library. Each unit and its relation to the other units should be considered carefully. It is in the work unit that the home-maker spends most of her time and its consideration comes first. The work unit should be located so as to receive much light, and should be as cheerful and interesting as possible; one remembers Mark Twain's recipe for making the servant happy—"put the kitchen on the front side of the house, so she can see the circus parade go by!" Ample provision for an adequate rest and recreation place should not be forgotten. The rest unit should provide quiet. The recreation unit should give a clear, unobstructed view and ample space for the social activities of the family and others who come in. There it is that members of the family spend their lesiure time at home.

The Number of Rooms and Their Arrangement Are Important.—The number of rooms should be adequate for the number in the family. It is especially necessary that there be enough bedrooms. Not more than two persons for one bedroom is a very good rule; the bedroom is the only private room, and there are many times when people wish to be alone. There are also health factors to be considered. The arrangement of the rooms is important. Many houses

Fig. 17. A pleasing floor plan for a small home.
Courtesy of H. E. Wickers, Kansas State Agricultural College.

have very faulty room arrangement. Frequently a bedroom has no connection with the bathroom except by passing through one or more rooms; this would be illegal under a tenement house law, but people building their own homes often make such mistakes in planning as to render privacy impossible. A two-story house should have a bedroom downstairs, or at least a room which can be so used if illness occurs in the family. Closets and storage space should be provided in all bedrooms, both upstairs and downstairs.

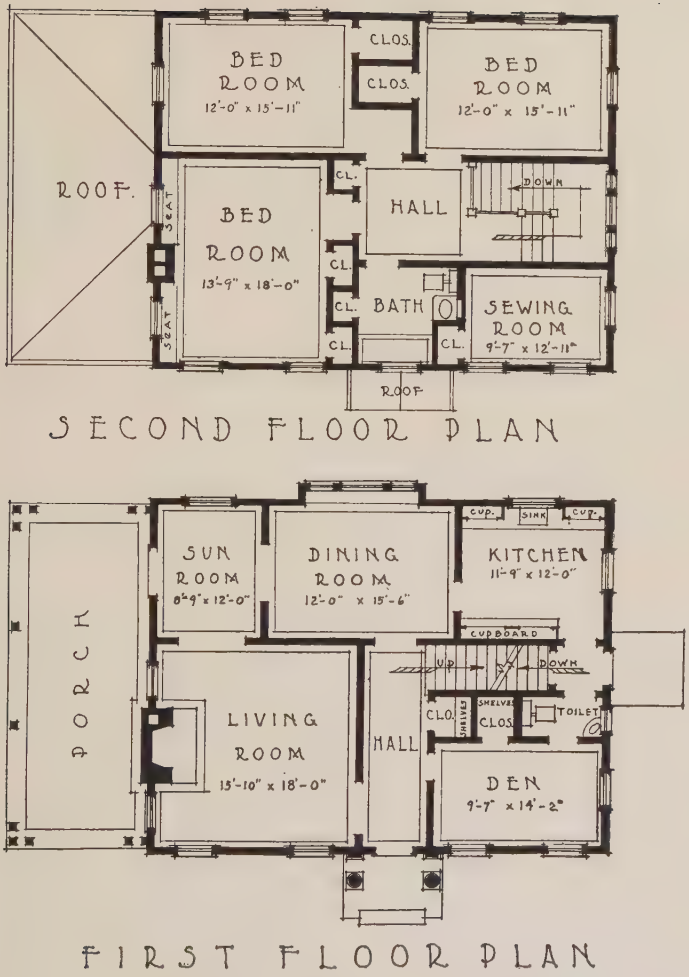

FIG. 18. A floor plan of a home designed to meet the needs of a family with children. Courtesy of H. E. Wickers, Kansas State Agricultural College.

The arrangement should be planned in terms of conveniences and labor saving facilities.

Interior Finishes Should Add to the Charm of the Home.—Well-finished floors and woodwork are beautiful. Although hardwood takes a more durable and attractive finish, it is often necessary to use the less expensive woods. Whether paint, stain, varnish, or wax is used the wood finish should be unobtrusive and in keeping with the rest of the house. White enameled woodwork is undesirable for a family with young children.

The walls may be finished in a dull-finish oil paint, in a kalsomine tint, or with paper, but whatever the choice they should be a background for the furnishings and individuals who live there.

Built-in conveniences add to the interest of a house and may well be a part of the interior finish. China closets, window seats, and bookcases built in this way add much to the beauty of the home and lessen the furniture expense.

Lighting and Plumbing Systems and Fixtures Should Be Carefully Chosen.—It is necessary that great care be taken in planning the lighting arrangement of a room. Poor lighting in a house is unattractive and is injurious to the eyes. Electricity and gas have made possible very desirable lighting systems even for the house away from service companies that has to provide its own means of illumination. The kerosene lamp has also been greatly improved. We speak of lighting as direct, semi-direct, and indirect. What is meant by these terms? What methods of lighting are used in your home? For the general lighting of a room, semi-direct or indirect lighting is considered the best. This type is used for living-rooms, and halls. Direct lighting used for close work is frequently provided by means of floor lamps

and table lamps with suitable shades. Some lamps have interchangeable shades, one for decorative use, and one for study and other close work. Either direct or semi-direct lighting may be used in dining rooms. In the direct, the light is placed over the dining table. Have you ever been at a dining table where you were made uncomfortable by the light? What was the difficulty? The dome light over the table should hang 24 inches above the table top. If chandeliers are used, there should be 45 inches between the table and the bottom of the shades.

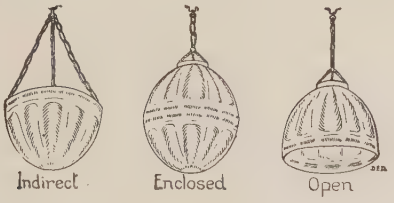

Fig. 19. Picture of Direct and Indirect Lighting. From *Health for Everyday*, Bigelow and Broadhurst, Silver, Burdett and Company.

In the bedroom, semi-direct lighting is used for general illumination. Direct lighting is helpful at the mirrors, and at the desk. If side lights are used for direct lighting at the mirror, they should be placed at a height of about 66 inches. If portable lamps are used on the dresser or dressing table for direct lighting, they should be high enough to light the face when standing. Adequate closet lighting adds greatly to the convenience of the home.

Direct light is usually desired in the kitchen, basement, and closets. Attractive fixtures in keeping with the house and its furnishings add much to the appearance of the room.

Several well-placed outlets for electric lamps, vacuum cleaners, and other equipment should be put in when a house is built.

Arrangement of the plumbing system should be studied carefully when the house is built. In many homes the comfort and convenience of the family are best served by having two bathrooms with moderately priced equipment instead of one elaborately equipped. Traps which are easily accessible for cleaning and a general "shut-off" which can be easily operated should be installed. Individual shut-offs with each water outlet greatly facilitate such repairing as washer renewals at faucets. The fixtures should be of good material, plain, and easily cleaned.

The Heating Plant Should Be Satisfactory.—What constitutes a satisfactory heating plant? Do you regard the one in your home as satisfactory? How does your heating plant differ from the one in your great-grandmother's home? In what ways was the system in her home unsatisfactory?

The most common methods of central heating for the house are the hot-air, steam, and hot-water systems. Heating by hot air may be satisfactorily done by the pipe and pipeless furnaces. Both are merely large stoves, located in a basement, having pipes to carry heated air to the rooms. The pipeless furnace is the less expensive, since the heated air is conveyed by one large pipe to a centrally located register which heats the rooms by a circulation of air. If a room is shut off, it soon becomes cold because the circulation of the heated air is closed from this room. What advantages do you see in hot-air heating? What are its disadvantages?

Hot-water heating plants are preferred by many homemakers. The mechanism of this system includes water piped from a reservoir to the various rooms with provision for its return to the reservoir when cooled. A fire box under the reservoir provides the means of heating the water. The fact that water rises when warm causes circulation through the pipes. The advantages of hot-water heating are that it

is clean and that it maintains an even temperature. The air in homes heated in this manner is seldom unpleasantly dry.

Steam is often used in the small or moderately sized house because it costs less than hot-water to install, although its operation usually requires more fuel. There are different steam systems, the vacuum being less expensive to operate.

In many homes the stove remains the means for heating, one or more being used, depending on the size of the house. The manufacture of the stove has been so improved that the attractiveness of a room need not be diminished even if stoves must be used for heating.

Before installing a heating plant it is well to consult some reliable authority, and to make investigation about costs and efficiency of different systems and different fuels. Oil and gas fuels are being increasingly used in many sections. It is highly desirable for the small or moderate home to choose a system that is easy to operate and care for, as well as one that is efficient.

The Kitchen Is the Workshop of the Home.—The housewife spends much of her time in the kitchen. It is her workshop and should be planned to her best advantage. Unless it is used for other purposes it should not be too large. There should be plenty of light and ventilation. The finishes should be of such type that they are easily cared for; for example, painted walls and linoleum floors. Built-in conveniences should be so arranged and located as to require a minimum amount of walking. The height of the working surfaces should be properly adjusted to workers. By having an efficiently planned kitchen, the housewife can do her work in much less time and under less trying conditions.

Exercises.—A. Select a house plan which you think is suitable for a young married couple whose income is $1,200 in a small town, or $2,000 in a city.

B. Select a house plan for a family composed of father, mother, baby, aged two years, a boy aged six years, and a girl of twelve years, whose income does not exceed $2,500.

C. The S family is six in number. Mr. and Mrs. S; Mr. S's mother; John, fourteen; Lucy seven; and Ann, ten. They have decided to own their home and wish either to buy or build. Mrs. S employs no regular help except occasionally to have someone come in by the hour. Mr. S. is the manager of a dry goods store and the family does some entertaining. They think that $6,000 is as much as they can invest in a home. What choice of house plan shall they make? What factors will influence their choice?

PROBLEM 6.—UPON WHAT BASIS SHALL WE CHOOSE THE FURNISHINGS FOR OUR HOUSE?

Furnishings Is an Inclusive Term.—Curtains, draperies, floor coverings, furniture, pictures, and small decorative objects are called furnishings. It is by means of these that the individual and "homey" touch is given to the house.

Have you ever been in a home that had costly furnishings, but failed to give any feeling of rest and quiet? How can you explain this failure? Perhaps you know of another home that seems to have hangings, furniture, and all other necessary furnishings, but lacks interest and life. You feel much as if you were in a furniture store display room. In the first home the principles of design were violated in either the choice or arrangement of the furnishings, or both. In the second home there was no expression of family interests or ideals. Only by expressing family ideals and interests through application of the principles of design can the furnishing of the home be truly satisfying.

Few families have the means to furnish their home completely when they are just established. The fact that the furnishings are acquired gradually in no way prevents harmony in the complete whole if one has made a plan in advance. Thought and care can insure this requisite. Good

quality and durability should be sought when making these purchases.

Choice of Furniture Is Influenced by Several Factors.—Many styles and types of furniture are on the market today. Some of the woods used are pine, beech, oak, walnut, mahogany, and red gum—differing in quality and durability. Much of the furniture is veneered and some is only stained. The furniture trade has recently adopted honest, descriptive

FIG. 20. A pleasant room in a modest home.

labels, but they are not everywhere in use. Period-style furniture is popular, as is also reed and wicker furniture. Each has its advantages and appropriate uses. In choosing furniture, remember that strong, well-made pieces are the best. Look carefully at the joints to be sure they are more than merely glued

Personal taste enters into the selection. Some people prefer one wood or style to another. Oak furniture is durable

and easily cared for, while polished mahogany requires much attention. When the family includes small children it is unwise to buy expensive furniture which requires much care. It is better to buy a type that will not be marred by finger prints and that will withstand hard use so that the entire family can enjoy it.

FIG. 21. A living-room with charm suitable for a family having an income of higher level. Courtesy of Utah Agricultural College.

The furniture already owned by the family has much to do with the selection of new pieces. Only such articles as will fit in with the rest of the furniture should be chosen. There are several types which fit in well in most places and selection should be made from these. Windsor chairs, colonial rockers, and fiber chairs are good examples. The

family finances should always determine expenditures for furniture. The family with a $2,000 income attempting to buy a $500 dining-room suite is indeed very foolish. The general rule that all one's furnishings usually cost about half of one's annual income—that the $2,000 income will provide ultimately for $1,000 worth of furniture and furnishings, is a safe guide.

Curtains and Draperies Should Be in Keeping with the Other Furnishings.—It is not necessary to spend a large amount for window furnishings. Very pretty cotton and rayon materials are now available in beautiful patterns and weaves. It is easy to select those which are suitable for a small house so as to carry out a color scheme. Curtains should furnish privacy and not exclude the light. Draperies should add to the attractiveness of the room and should be of a fabric and design that the family will not find tiring. Curtains and draperies which will withstand frequent launderings and cleaning are practical and desirable for many homes. Heavy velvet draperies and elaborate lace curtains are out of place in the average home.

Floor Coverings Should Be Chosen with Care.—What is the purpose of a floor covering? What kinds do you have in your home? Which of these seem to you to be the most satisfactory? Why?

The floor coverings which are generally used are rugs, carpets, and linoleums. The principal types of rugs and carpets are rag, Wilton, Axminster, and Brussels, and there are several grades in each type. The cost, use, and care required will influence the choice of these coverings. Linoleum is a very satisfactory covering for any kitchen because it is easily washed. Real linoleum is made of ground cork and oil; there is an imitation with a felt or paper backing, cheaper and much less durable, not to be confused with

genuine linoleum. In farm homes and in homes where there are small children, linoleum also makes a satisfactory covering for the dining-room floor.

In general, rugs are the most desirable covering for living-room floors, and are to be preferred to carpets. Of

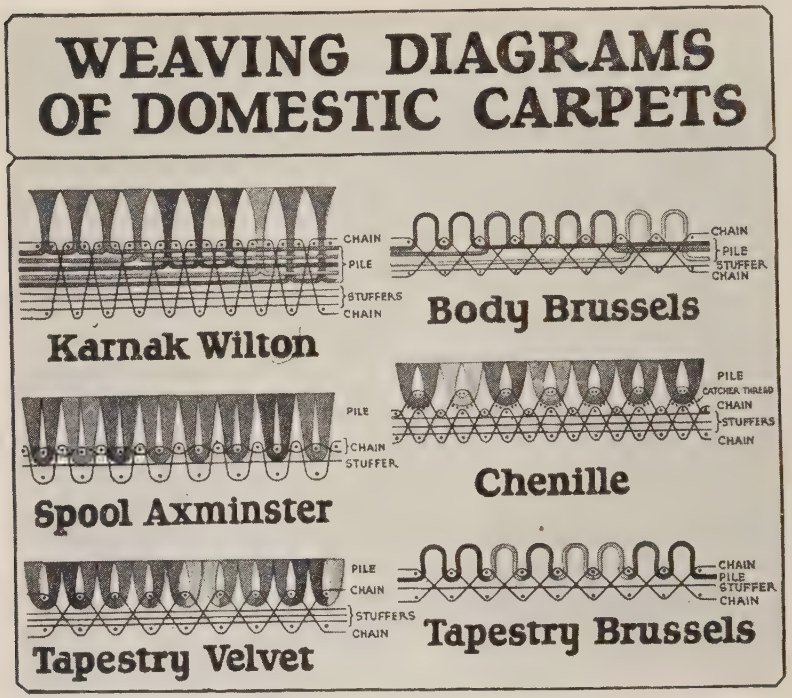

Fig. 22. Weaving diagrams of domestic carpets. Courtesy of Hoover Bros.

these, Wilton rugs are the most expensive, but also wear the best. Some families prefer several small rugs to one large rug; others like to use carpets. With an efficient vacuum cleaner, it is possible to use carpets and still have the cleaning satisfactorily done.

Floor coverings are a background for the furniture and should be selected with this in mind. Have you ever seen a rug with a dog or a large basket of roses for its pattern?

Fig. 23. Dining-room of a house built in 1724. Courtesy of *House Beautiful.*

Why would such a rug be a poor addition to home furnishings?

Small and Decorative Objects Have an Important Place in the Home.—A few small decorative objects are desirable

in every home, but their selection and use should be made with care. There are two points to be considered. The first of these is that only objects good in design should be used. A lovely bowl or vase may add the needed touch of beauty to a room. Artistic candle sticks or bowls of brass may introduce a bit of Old World interest and charm. A yellowed sampler of other days, or a quaint foot-stool, suggests the home life of other generations of the family. If these articles are good in design, they enrich the interest of the room. Ugly things, whether new and faddish, such as a vulgar Kewpie lamp, or old and revered such as an enlarged crayon portrait of a forgotten ancestor, never add to the charm of a room.

The second point is that there should be only a limited number even of good objects in the room. The practice of cluttering the piano or mantle with many vases, statuettes, and other objects is to be discouraged.

Pictures Should Be Chosen to Enrich Home Life.—Well-selected pictures add greatly to the beauty of the home. They should fit in with the other furnishings and give joy and pleasure to the family members. There are many classes of pictures from which to choose, but the most desirable ones are those which have a permanent appeal and which grow in attractiveness as you come to know them. Daily association with a few good pictures develops a real love for beauty. Children are fortunate to have this kind of home training.

Exercises.—A. Plan the furnishings for a room in your home. Estimate the cost.

B. Plan and furnish for $60.00 a living- or dining-room for a newly-wed couple.

C. Plan and make draperies and curtains for a room.

D. Choose pictures suitable for the following rooms: Dining-room, bedroom, den.

E. Mr. and Mrs. Jones have two small children, aged three and six. They have been living in a four-room cottage. Their main furnishings consist of one axminster rug, nine by twelve, one congoleum rug, nine by twelve, two small rag rugs, one large bed, two small beds for children, one dresser, one dining table, six chairs, two oak rockers, one kitchen table, one library table. They have $300 to put in new furniture. What will you plan for them to buy?

Fig. 24. Small kitchen necessities. Courtesy of Good Housekeeping Institute.

PROBLEM 7.—HOW CAN EQUIPMENT FOR THE HOME BEST BE CHOSEN?

An Equipment List Should Be Planned.—What articles of equipment in your home are used most often? What pieces have been purchased this year? What additional items of equipment are needed? Make a list covering everything owned and all the needs you can discover.

In every home there are certain tools that the housewife must have to do her work. There are other tools that would often be helpful, and still others that are of use rarely. Every year there are new pieces placed in the average home. If these new purchases are made because the salesman at the door was persistent, or because the ware looked pretty,

money that may be needed elsewhere is being tied up in unproductive investment.

An equipment list enables the housewife to ascertain the adequacy of her present equipment and gives a basis for balanced replenishing and additions so that no one need of the house is overlooked. Further, it prevents useless and thoughtless purchasing. The housewife established in her home finds such a list helpful. The bride going into her home will find such a list invaluable.

The following suggestive list is included. What would you add to it? What might be omitted?

A Purchasing Guide for the Bride*

At Kitchen Cabinet or Work Table

1 set storage jars
3 mixing bowls, nested: pint, quart, 2 quart
1 lemon-squeezer, glass, wide juice rim with lip
6 custard cups
1 flour-sifter
1 grater
2 measuring cups, glass and tin
1 quart measure
1 biscuit-cutter
1 set of muffin pans, 6 or 8 in a set
1 casserole, 1 qt.
1 egg-beater, wheel type
1 scissors, 8″
1 knife-sharpener
1 slicing knife, 9″ blade
1 bread knife
1 case knife
1 spatula, 7″ blade
1 fork, two tines, 4″
1 fork, two tines, 6″
2 teaspoons
2 tablespoons
1 wooden spoon, 10″
1 apple-corer
1 corkscrew and bottle opener
1 wire-strainer
1 utility plate, 12″ diameter
1 set measuring spoons
1 can-opener
1 workboard for mincing, etc., 12″ by 8″
1 chopping bowl and knife
1 bread box
1 cake box
1 bread board

Near or at Range

1 ladle
1 salt-and-pepper shaker
1 potato-masher
1 coffee-making appliance
1 teapot
1 frying-pan
1 double-boiler, 1½ qts.
2 lipped saucepans
1 basting-spoon
1 toaster
1 oven thermometer
1 kettle

*Adapted from list by Marian Mayer.

At Sink

1 towel rack
1 paring-knife
1 funnel
1 sink-strainer
1 soap dish
1 soap-shaker
1 dishpan, 12 qt.
1 vegetable brush
2 straight-sided covered vegetable pans, 3½ qts. each
1 garbage can
1 colander

Storage Cabinet

1 oblong cake-pan, 10″ by 5″
2 layer-cake pans, 9″
1 cooky sheet, 12″ by 12″
1 griddle, 10″
2 pie plates, 10″
1 roasting pan, 15″ by 10″
1 Berlin pan with cover, 6 quarts
2 wire cake coolers
1 food-chopper
1 rolling-pin

For Refrigerator

1 butter jar
3 refrigerator dishes for left-overs
1 ice pick

Optional Equipment

Household scales
1 or more jelly molds
1 grapefruit knife
1 tube cake-pan
1 doughnut cutter
1 ice-cream freezer
1 wooden mallet
1 heavy ice bag
1 deep fat frying kettle with basket to fit

Household Tools

1 screw-driver
1 hammer
1 monkey wrench
1 pair pliers

Choice of Equipment Is Affected by Its Cost.—How often have you heard your mother express a desire for a certain piece of equipment, saying in the same breath, "But we can't afford it"? There are many homes that have different equipment from what would have been purchased if cost were not a factor. In general, the cost of an article is interpreted to mean its purchase price. Quite as important as the initial cost, are the upkeep and the maintenance costs. Before any large piece of equipment is bought, data on the yearly costs of operation and repairs should be obtained, and the choice should be determined by original cost and operation costs measured against the amount of use your family can secure from the object.

The average home in a community served by electricity

has an electric iron, a toaster, and in many cases a washing machine. Why were these articles the first to be purchased?

Choice of Equipment Should Be Made on The Basis of Efficiency.—What do we mean by the efficiency of a piece of equipment? If you were interested in the efficiency of a certain washing machine, you would determine whether it washed badly soiled clothes clean. If you found it did, you would regard it as effective. The next point to be considered would be the time and energy spent in its operation. If you found that more time or more energy was required to use the machine than would be necessary to do the work without it, you would regard it as wasteful. If the machine did effective work with a minimum amount of work on your part, its efficiency would be demonstrated.

The same test should be applied to every piece of household equipment. Is it effective? Does it save time and energy?

Equipment Should Be Durable.—Only equipment which is durable should be chosen. Cheap equipment which must be replaced frequently is the most expensive in the end. Cheap aluminum and enamel ware are examples of equipment of poor wearing quality.

To say that all kitchen equipment should be of one material is folly. A tin cake-pan will last for years, but an aluminum preserving kettle is much more durable than a tin one, and is therefore a better choice. If it is not possible to purchase the entire list of equipment, buy the items needed most and then obtain the others at a later time. It is better to buy durable equipment one piece at a time than cheap equipment which must be replaced often.

Choice of Equipment Should Be Influenced by the Care It Requires.—If a piece of equipment requires a large amount of care it will never prove satisfactory in use.

FIG. 25. Utensils for dough work. Courtesy of Good Housekeeping Institute.

FIG. 26. Different kinds of saucepans. Courtesy of Good Housekeeping Institute.

FIG. 27. Baking dishes. Courtesy of Good Housekeeping Institute.

Cake-mixers, bottle cream-skimmers, and potato-ricers are examples of such equipment. Equipment should facilitate work. Any piece that increases labor without adequate return in some form should be omitted from the list. Much money can be invested unwisely in equipment. Care should be taken that articles purchased simplify rather than complicate life.

Exercises.—A. Plan the equipment which you would add to your home kitchen if you had $15.00 for that purpose.

B. How much will be required to purchase adequate laundry equipment for a newly-wed couple?

C. The A family has an income of $1,800 per year. They have two children, a boy, ten, and a girl, twelve. Mrs. A does all of her own work. How much can the A family spend for equipment each year? What large pieces will they be justified in purchasing first?

PROBLEM 8.—HOW SHALL PROVISION BE MADE IN THE BUDGET FOR FURNISHINGS AND EQUIPMENT?

Certain of These Expenditures Are Necessary.—Equipment may be classified as necessities, comforts, and luxuries. A cook stove, a few utensils, dishes, bed, and a broom can scarcely be termed anything but necessities. Clothes cannot be washed and ironed without some sort of tub and iron. Expenditures for comforts in equipment and furnishings make work easier, more effective and enjoyable. A washing machine, additional utensils, a dining-room suite, and a victrola belong in the group of "comfort equipment and furnishings." The "luxuries group" includes lavish expenditures for equipment and furnishings. For a family on an $1,800 income, the purchase of an electric mangle, a baby grand piano, or sterling silver flatware constitutes expenditures for luxury.

Accumulated Savings Make Further Purchases Possible.—It is always a much better plan to buy after the saving is done than before. With the money in hand a more desirable purchase may be made and frequently money may be saved. Accumulated savings enable the purchaser to shop in different stores instead of limiting the purchase to "credit" stores. Also, during the period of saving, a study may be made of the article to be bought and through this thoughtful consideration, mistakes are avoided.

Installment purchasing should be avoided. However, the purchase of a large piece of household equipment which means the reduction of an operating expense is probably an exception. Securing a vacuum cleaner, sewing machine, or washing machine by such a plan would be justified.

A Definite Amount Should Be Set Aside Monthly.—Very often families forget to provide for equipment and furnishing. Instead of setting aside a sum regularly, they wait until all of the equipment and furnishings become worn out and shabby. A large amount is then necessary for replacement and no plan has been made. A definite amount set aside each month for this purpose is an excellent means of providing for replacement.

Besides setting aside money for these items a general plan of replacement and repair should be followed. Bed linen, dishes, cleaning equipment, and furniture should be replaced at different times so as not to bring too great a strain on the income at any one time.

In your study of the budget the suggestion was made that the replacement of worn-out equipment and addition of new items should be met from the allotment for operating expenses. The total amount budgeted for operating expenses was 15–20 per cent of the income.

Considering the various items to be paid from the operat-

ing expense allotment, what do you think is a reasonable amount to be spent yearly for replacement of the household equipment and furnishings on an $1,800 income?

Exercises.—A. How much does your family spend yearly for equipment and furnishings? How does this compare with other expenditures?

B. Outline a specific plan whereby a family can keep its furnishings and equipment replaced and in good repair.

C. Which of the following statements is correct?

1. Desirable shelter makes possible (a) the health of the family; (b) frequent attendance at picture shows; (c) close neighbors.

2. Every family needs (a) a large lawn; (b) a garage; (c) adequate room space.

3. The amount of money available for shelter depends upon (a) the number in the family; (b) the family income; (c) the family standard of living.

4. Home renting is desirable because it (a) provides a method of securing shelter by means of monthly payments; (b) costs less; (c) is more satisfactory.

5. A large house should be chosen because (a) it gives a family social position; (b) the family is large; (c) it is beautiful in appearance.

6. The first consideration in choosing a house should be the (a) cost; (b) location; (c) convenience for the housewife.

7. The first consideration should be given to the (a) work; (b) rest; (c) recreation unit of the house.

8. A good rule is (a) three persons for one bedroom; (b) one person for one bedroom; (c) not more than two persons for one bedroom.

9. The best method for lighting the kitchen and basement is (a) direct; (b) semi-direct; (c) indirect.

10. Not more than (a) twice; (b) one-half; (c) one-fourth the amount of the yearly income of the family should be invested in furnishings.

11. In the home of average means (a) heavy velvet draperies; (b) axminster rugs; (c) sterling silver flatware are out of place.

12. Beauty is added to the living-room by (a) enlarged family portraits; (b) colorful kewpie lamps; (c) well-designed brass candlesticks.

13. The choice of a piece of equipment should be influenced by (a) its cost; (b) its beauty; (c) the store that sells it.

14. It is better to choose all kitchen equipment of (a) one material; (b) two materials; (c) various materials.

15. Satisfactory methods of making provision for obtaining furnishings and equipment in the home are (a) accumulated savings; (b) installment buying; (c) buying whenever needed.

16. The proportion spent for shelter should come within (a) 50%; (b) 10%; (c) 20% of the family income.

17. Wise choices in furnishings and equipment depend upon (a) a large amount of money; (b) good judgment on the part of the purchaser; (c) the advice of friends.

18. The furnishings of the home provide a means of (a) expressing the ideals of the family; (b) out-doing one's neighbors; (c) indicating social position.

19. The plan of the selected house should be (a) in keeping with the family income; (b) the newest style; (c) much like the plans of the homes of your friends and associates.

20. In building a home careful consideration should be given to (a) the possibilities of selling; (b) how soon you can move in it; (c) how large to make the coal-bin.

Additional Problems and Exercises.—1. Visit some houses for rent or for sale at different prices. Compare them in regard to their exterior, interior, and desirability as a place in which to live.

2. Determine the amount required for insurance and taxes for your own home.

3. What are luxuries in home furnishings? What are necessities?

4. Class make a comfort and comfort protector.

5. Class refinish an old piece of furniture.

6. How will the family determine the amount to spend for a home?

7. Plan what will be needed by a young couple starting housekeeping in your community. Determine the cost of this list.

8. How does the social status of the family affect the shelter needs?

9. Compare the cost of built-in devices with the cost of similar equipment not built in.

10. How much closet space is necessary and advisable?

11. Draw a plan for remodeling an old home. Estimate the cost. Determine whether or not such an undertaking would be wise from a financial standpoint.

12. Plan a list of dining-room equipment for a family of four whose income is less than $2,000.

13. Write a theme on the best methods for the heating, plumbing, and lighting of a house.

14. Select and mount examples of desirable furnishings for an average home.

Books for Class Reference:

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Gray, Greta. "House and Home." J. B. Lippincott Co.
Izor, E. P. "Costume Design and Home Planning." Atkinson Mentzer Co.
Kinne, Helen, and Cooley, A. M. "Shelter and Clothing." The Macmillan Co.
Matthews, M. L. "The House and Its Care." Little, Brown and Co.

Suggested Bulletins and Leaflets for Teacher and Student:

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Bane, G. M. and Twitch, H. P. "Just Kitchens." Ohio Agr. Ext. Bul. 66, Columbus, Ohio.
Bane, G. M. "Room Arrangement." Ohio Agr. Ext. Cir., Vol. 11, No. 4, Columbus, Ohio.
Bell, M. C. "A. B. C. of Kitchen Arrangement." New Jersey Agr. Ext. Bul. 65, New Brunswick, N. J.
Boomer, S. H. and Woodward, K. W. "Furniture, Floors and Finishes." New Hampshire Agr. Ext. Cir. 58 Durham, N. H.
"Journal Bungalows." Ladies Home Journal, Service Bureau, Phila., Pa.
Burnam, A. and Lacy, E. "4-H Club Girl's Room." Kentucky Agr. Ext. Cir. 205, Lexington, Ky.
"Buying an Electric Refrigerator." FL–233, Woman's Home Companion, N. Y. C.
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Carter, G. and Johnson, M. "Built-in Equipment for Home Convenience." Ark. Agr. Ext. Cir. 244 Fayetteville, Ark.
Clark, F. "Working Heights for Kitchen Equipment." Mo. Agr. Ext. Cir. 167, Columbus, Mo.
"Color in Your Home." Good Housekeeping, N. Y. C.
Complete architect's blueprints drawn to ¼″ scale, with detailed working drawings and specifications. For information about prices of plans send stamped addressed envelope—Mr. Ellis, Architectural Editor, Woman's Home Companion, N. Y. C.
"Curtains in the Home." Delineator, N. Y. C.
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"McCall's Home Decoration Course." Lessons I–IV, McCall's Magazine, N. Y. C.
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Drago, M. "Home Improvement." La. Agr. Ext. Cir. 83, Baton Rouge, La.
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"Five Ways of Saving Fuel in Heating Houses." Bureau of Mines Tech. Papers, No. 199, U. S. Bureau of Mines, Washington, D. C.
"Floors—Selection, Finish and Treatment." Woman's Home Companion, N. Y. C.
"For Your Windows. Textile and Color Values of Certain Stuffs and Use of Valances and Overhangings." Woman's Home Companion, N. Y. C.
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"How to Equip the Clothes Closet." Good Housekeeping, N. Y. C.
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UNIT FOUR

CARE OF THE HOME

Introductory studies.—1. What must be done every day to keep your home in order?

2. How would you divide the work among the members of the family?

3. Outline a good plan for keeping the bathroom and equipment clean, through the coöperation of all members of the family.

4. What equipment for cleaning floors and floor covering do you have in your home?

5. Write a paragraph on the advantages of orderliness.

6. What stains occur most frequently on household linens?

7. Name five common household insect pests.

Presentation of the Unit.—You have been studying the plans, equipment, and appointments of an attractive home. If you were to be presented with a home as ideal in every regard as you could imagine, you would find that in a brief time its attractiveness would be greatly lessened unless it received proper care. Have you ever entered a room that was dusty and disorderly, with pictures awry and window shades at different heights? What effect does such a room have upon you?

Regardless of its furnishings, the home affords rest and immediate satisfaction to the family only if well cared for. How will failure to give the home proper care affect the value of the investment the furnishings represent? What habits may develop from living in a poorly-kept home? Will the family like to bring friends in? Will they wish to stay at home themselves? Will it be restful when they are tired? It is to the moral, social, and financial advantage of the family to have the home well kept.

What daily housekeeping tasks must be done to keep a

home clean and in order? Suppose you list just those which you do, and then complete the list of all the housekeeping duties performed daily by the other members of your family. Your list will include cleaning of rooms, dusting furniture, scouring pans, making beds, caring for the bathroom, and innumerable other duties. In addition to these daily tasks there are others that occur weekly, such as the family laundry and general cleaning. There are still others that need to be done only at irregular intervals, such as the washing of the bedding, ridding the house of an invasion of ants, and waxing the floors. To accomplish all the daily tasks and provide time for the weekly and irregular ones, without hampering family life, requires efficient home management, knowledge, and skill in housekeeping procedures, and coöperation from all members of the family.

Because you wish your home to be attractive, without its care being a burden, you are interested in good methods for its care. Good methods continually used keep a home in order without the stress and strain many people experience in their housekeeping. People once had regular periods of general housekeeping, at which time they cleaned everything from cellar to garret. All the furniture and furnishings were removed and a thorough cleaning was done. Everyone in the family dreaded to see housecleaning time come. By doing some cleaning each day, there is no need for the much dreaded housecleaning periods.

The responsibility for the care of the home should not fall upon any one member. When this occurs it is an unfair situation. Frequently the family members think that the entire responsibility belongs to the mother, and leave all of the work for her to do; they thus deprive her of much enjoyment and pleasure to which she is entitled.

Every member should have a share in caring for the

home. When all of the members are having a part, no one person is overburdened. Every girl and boy should care for his own room, and assume some responsibility for other duties. A willing and cheerful attitude in performing these tasks makes the care of the home a joy. There is great satisfaction to be had in having a well-kept home, and the family members should be happy in working together for this end.

PROBLEM 1.—WHAT IS INCLUDED IN THE CARE OF THE HOUSE?

One of the first considerations in caring for a house is the care of the rooms. These need daily attention of some kind, and good methods are essential to efficient work.

The Care of Floors and Woodwork Is Important.—Although the floors and woodwork require a little different method of care, they are ordinarily considered together. The treatment given them depends largely upon the wood and the type of finish. Sweeping will be necessary every day in some, if not all, of the rooms, and this should be followed by the use of the dust mop.

Waxed woods should not be oiled or washed with water. Use only a mop moistened with turpentine and then a clean dry mop for polishing. Waxed floors should be polished with a weighted brush about once a month and need rewaxing every two or three months.

Varnished floors need a dry or oil mop or dust cloth used daily. Water coarsens the wood and removes the varnish. Shellaced wood should be wiped with a dust cloth without oil, and water should not be used. Painted or enameled wood may be wiped with a woolen cloth wrung out of a pure soap suds, but should not be scrubbed with water. An oil mop and cloth may also be used on painted wood.

The woodwork can be kept in order by wiping frequently

with a dry dust cloth. At least once a month, it needs special attention. If the woodwork is enameled or painted, the process suggested for painted floors is recommended. Varnished woodwork may be wiped with a cloth wrung out of mild soap suds, and then rubbed with an oiled cloth. Waxed woodwork may be wiped with a clean cloth moistened with turpentine, and then polished with a clean dry cloth. Rewaxing may be necessary during the year.

The Care of the Walls and Windows Is Important.—The walls should be cleaned frequently. Papered walls should be wiped down carefully with a soft brush or cloth so as not to injure or streak the paper. Painted walls may be washed with warm soapy water made with a mild soap.

Windows should be washed as often as is necessary to keep them in good condition. Various window cleaners are on the market and help in doing effective work. Some housewives prefer soap suds with plenty of cloths for polishing. Commercial cleaners containing whiting and filler may clean the windows easily but often are hard on the woodwork. However, the economy of human labor may lead to their use.

The Care of the Basement and Attic Involves Special Problems.—The basement and attic should not be neglected. Sometimes these places are used as catch-alls for débris and dirt, and make the cleaning problems in the rest of the house very difficult.

The basement and attic should be kept dry, well aired, and free from dust. The habit of storing useless trash in these places should be avoided. All worthless articles and objects should be destroyed and not allowed to accumulate. The basement and attic can be made attractive and useful places in the house.

The Care of the Bathroom Is an Ever-Present Problem.—The bathroom, to be sanitary and well kept, should have daily and weekly care. Daily care includes cleaning the floor, washing the tub and bowl, and cleaning the nickel, glassware, and dishes. Weekly care includes mopping the floor and wiping down the walls.

The bowl of the stool should be frequently scoured and a deodorant used. Special brushes are on the market for cleaning the tub, stool, and traps. Although many of the deodorants and cleaners are excellent for use in the stool, they are not safe for the tub and lavatory. Precautions should be taken that their use is not extended to these. In many homes the bathroom is neglected and unsightly. It is a good plan to have some one member of the family definitely responsible for its care, with an understanding on the part of the other members of their responsibility for leaving the tub and bowl in order after use. The statement, "A pessimist scrubs the tub when she gets in, an optimist scrubs the tub when she gets out, but a 'real lady' scrubs it both times," colorfully expresses a good bathroom rule.

Closets require special attention.—How many different kinds of closets are there in your home? In what ways does the care they require differ? Which one is easiest to keep in order?

Closets, like other rooms of the house, should be aired, dusted, and put in order. An accumulation of trash is as untidy and out of place in a closet as it would be in the corner of a living-room. Careless piling or hanging of clothes in a closet lessens its capacity and use.

The linen closet is a special problem. Have you ever hunted for pillow cases, or dresser scarfs, only to find them submerged under sheets and bath towels? A careful plan

for the arrangement of a linen closet, followed by all the members of the family, is the only way that it can be effectively used.

FIG. 28. Linen closet with good arrangement of drawers and shelves—very suitable for a hall. Balderston's *Housewifery*.

The cleaning closet is often omitted in the house plans, to be sometimes replaced by a cleaning cabinet. Provision

for one or the other is highly desirable. On the shelf there should be kept such cleaning supplies as wax, machine oil, turpentine, and floor oil. The brushes, brooms, and mops

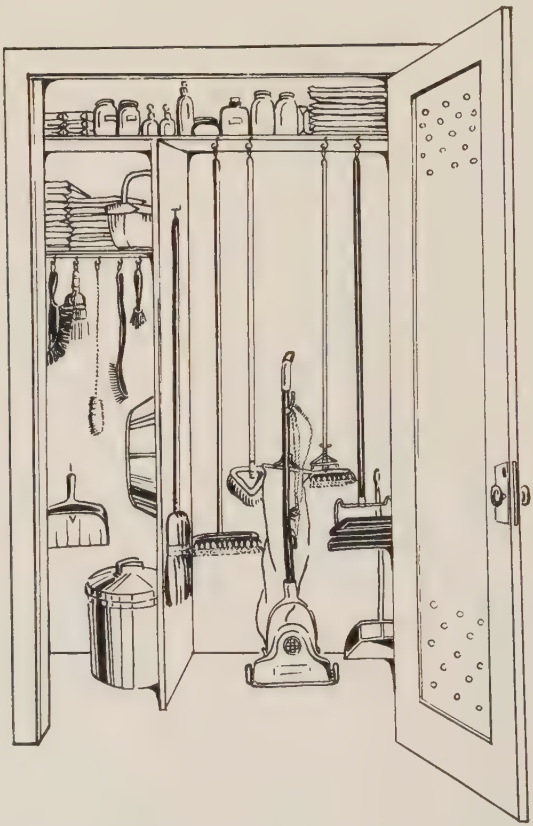

Fig. 29. Cleaning closet with good arrangement of shelves and hooks.

should have screw rings attached to the end so that they may be kept hanging up. A bag or basket should be provided for clean cloths for cleaning work. If the vacuum cleaner is kept in the closet, the other equipment should be

so arranged that the cleaner can be taken out without removing the contents of the closet.

The china closet and the storage closet present simple problems of orderliness and cleanliness. Their neglect leads to inconvenience and unsightliness.

Exercises.—A. Class clean school rest room, Girls' Reserve room, or principal's office.

B. Class clean Home Economics laboratory. Determine what methods of washing windows and woodwork were the most effective.

C. Mrs. Black complains daily that it is impossible for her to keep clean and in order the bathroom used by her family of five. She states that the tile floor and attractive fixtures only add to her work. What plans for the care of the bathroom might be satisfactory? Give in detail the type of cleaning each fixture should have.

PROBLEM 2.—WHAT ARE SOME OF THE IMPORTANT CONSIDERATIONS IN THE CARE OF HOUSEHOLD FURNISHINGS AND EQUIPMENT?

Care of Curtains and Draperies Is Necessary.—Curtains and draperies frequently need to be taken down and aired. This may be done most easily by hanging them over the clothesline and brushing them with a whisk broom. In homes having a vacuum cleaner, the curtains may be cleaned without taking them from the rods, by use of the special attachments of the cleaner.

Curtains usually need to be laundered every month or two, depending on the smoke and dirt, and the draperies two or three times a year. Since some draperies cannot be washed, it is necessary to have them dry cleaned.

Each Type of Floor Covering Requires Special Care.—Carpets and rugs should be cleaned at least once a week with a vacuum cleaner. Use of this equipment does away with the beating of rugs, which lessens their life. Some of the

small rag rugs may be cleaned by ordinary laundry methods. Linoleums, if waxed, should be given the same care as waxed wood floors. If they are not waxed, after a careful brushing they should be mopped with warm soapy water, using a minimum of water so that it will not get down possible cracks and under the linoleum.

The Care of Furniture Differs with the Wood.—Some kinds of furniture require much more care to keep them looking well than do others. In selecting furniture it is well to keep this in mind. The waxed and dull finish furniture is more popular at the present time and its care is not burdensome. Varnished and highly polished woods are easily scratched and are difficult to keep in good condition. Mahogany and walnut furniture require much care.

Most furniture may be dusted with a cloth on which a few drops of a standard furniture polish have been poured. When waxed oak furniture has become very dirty, it may be washed with a cloth wrung from warm soapy water, and then wiped dry with a soft cloth and waxed.

Overstuffed and upholstered furniture is best cleaned with a vacuum cleaner. A whisk broom is useful if no better means is available. Carbon tetrachloride will remove the grease stains on the back and arms of upholstered chairs and davenports without danger as it is not explosive. Another advantage it has is that the odor soon disappears.

Reed and wicker furniture require a brush which is not too stiff and harsh. Only the best of polish should be used on them. A good furniture polish may be made at home by the following method. Put into a quart bottle in the order named:

1. ½ cup powdered rottenstone
2. ½ cup cold drawn linseed oil
3. ½ cup turpentine

4. ½ cup naphtha
5. ½ cup strong solution oxalic acid
6. ¼ cup wood alcohol
7. ½ cup cold water to which has been added 1 tablespoon of sulphuric acid. (Handle acid with great care.)

Shake well before using.

Fixtures and Small Objects Need Care.—Light, heating, and plumbing fixtures need special attention. If you were to classify the various fixtures in your home that are made of the same material as certain other pieces of equipment, you would find that the care required for each is much the same. For example, electric light shades of china or glass are cared for as are dishes and glassware. Brass and nickel fixtures are cleaned in the manner suggested in Unit Four, Problem 3, for the care of brass and nickel (p. 111).

Radiators and registers need special cleaning. In cleaning a radiator, place a newspaper underneath it and proceed with a special brush to remove all dust and lint from the crevices. The newspaper furnishes a convenient means of conveying the collected dirt to the trash burner or the furnace. Once or twice a year it may be necessary to have the radiators retouched with metal paint. The care of registers requires a different method. Have you ever examined carefully a hot-air register? You will find that the grating lifts out. A newspaper may be placed on the floor and the register put on it. The lint and dust from the register and its shutter are brushed onto the paper. The register is then washed. With a whisk broom the dust and lint are removed from the hot-air shaft and taken with the other débris to be burned. The opening to the hot-air shaft is then washed and the register returned to its place. This is not a difficult task and aids much in keeping the room clean.

Pictures and small objects collect dust rapidly. Pictures should be removed from the wall when it is being wiped

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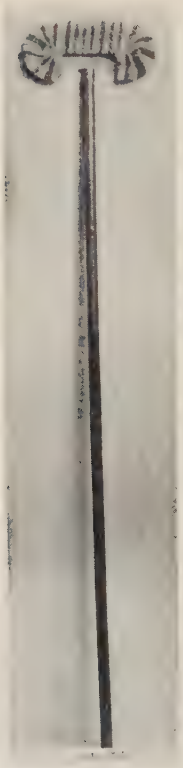

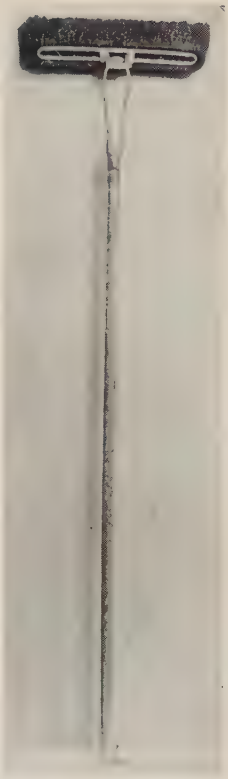

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FIG. 30. Useful brushes for the care of the home. A. Radiator brush. B. Wall brush. C. Push brush. D. Stair brush. Courtesy of Good Housekeeping Institute.

down. The glass should be cleaned and the frame and back carefully wiped.

Marble, ornamental pottery, vases, and statuettes may be kept in good condition by washing with soap and water, and polishing with a soft dry cloth.

Books usually bring much of interest and charm to a room. They do, however, need care. If no care is given them, they soon get in disorder and detract from the appearance of an otherwise well-kept room. In cleaning books they should be taken from the shelves, and each book wiped separately. The shelves should be dusted and the books returned.

The Refrigerator and Stove Need Care.—The care of the refrigerator is very important. It should be kept clean and dry. After washing with soapy water, it should be rinsed and dried thoroughly. Food should not be allowed to spoil in the refrigerator and all dishes used should be kept perfectly clean. Foods of strong odor should never be placed in the refrigerator. Each week the ice compartment should be thoroughly washed and rinsed, and the drain pipes carefully cleaned with a brush and water in which washing soda has been dissolved.

A coal or wood stove should have the ashes removed daily and should be kept clean with a damp cloth. Stove polish may also be applied. Gas, oil, and gasoline stoves should be frequently taken apart and cleaned. The wicks of the oil stove need daily wiping, and the oven should not be neglected. The oil stove is difficult to keep clean and sometimes fails to receive proper care, so that it becomes unattractive and gives off an odor in burning.

All Equipment Should Be Well Cared for.—Many housewives fail to get full return for their equipment investment because of the poor care they give it. It is utter folly to

buy expensive equipment and then misuse it. Laundry equipment is essential and is also expensive. It should have the best of care. The washing machine should be oiled regularly. Can you locate the places that should be oiled? When not in use, the machine should be kept in a dry and protected place. The same is true of the other pieces of laundry equipment.

All Electrical Equipment Needs Special Attention.—The cords and plugs should be handled carefully and put away when not in use. Hooks on which the cords may be hung simplify storage. When cleaning this equipment, care must be taken that the connection points are kept clean and dry. Many homes that include electric percolators, irons, toasters, warming pads, and vacuum cleaners in their equipment find the repair bills high, because of careless use, or careless cleaning. Directions should be read carefully and followed. The dealer should be consulted in any difficulty, and methods of simple repair should be learned. By thought the repair and upkeep can be reduced to a minimum. In selecting cleaning equipment, choose only those pieces which will be used enough to pay for their purchase and in which the care does not outweigh the advantage. Sometimes improvised tools are better than elaborate and expensive ones.

Exercises.—A. Polish the furniture and wax the floor in the school rest room.

B. Clean various large pieces of equipment in the Home Economics laboratory and discuss the methods used and their results.

C. Clean the radiators in several rooms.

D. Clean the light fixtures in the laboratory.

PROBLEM 3.—WHAT CARE SHOULD BE GIVEN HOUSEHOLD UTENSILS?

Careful Use of All Utensils Increases Their Durability.—There are few housewives who do not take joy and pride in

having bright and shining utensils. Care in the use of utensils is of the first importance. Burning food in the pans and kettles, chipping the enamel, and scraping it with sharp edges, are injurious to its wearing qualities.

Much unnecessary cleaning can be avoided by proper daily care. Metal stains are similar to clothing stains in that their removal is much easier and quicker when the stain is new than after it has stood a long time or has been burned on the pan or kettle.

Silverware Should Be Well Polished.—The tarnish on silver results from sulphur compounds that are in the air, in many foods, in wood and rubber, and in some bleached and dyed materials. Dryness prevents tarnish, so camphor gum is sometimes put into the silver drawer to absorb moisture.

Silver may be cleaned by using whiting or chalk mixed to a paste with ammonia. It should be applied to the silver, allowed to dry, and then rubbed off with a soft cloth or brush. The silver should then be rinsed well and polished with a soft cloth. Another method of cleaning is as follows: Fill a porcelain kettle partly full of water in which has been dissolved one teaspoonful of either washing or baking soda and one teaspoonful of salt to each quart of water. Place a discarded piece of aluminum in the kettle, and heat the water to the boiling point. Put in the tarnished silver and boil it. The silver must be completely covered by the water. When the tarnish is gone, rinse thoroughly and polish with a soft cloth. This method should not be used for silver having a special oxidized finish.

China and Glassware Need Special Care.—China should be washed in warm soap suds, thoroughly rinsed in hot water, and wiped dry. Glassware is usually polished from the hot suds with a soft cloth. Care should be taken that china and glassware are not chipped or cracked. Pressed

and cut glass and some pieces of china should be washed with a brush. Bright and shining tableware add much to the appearance of the dinner table.

The Various Metals in Kitchen Utensils Require Different Methods.—Metals should be cleaned by the method that means the least loss, the least roughening, the least expense of time and effort, and the best color as a finish. Many washing powders are available, but they are mostly

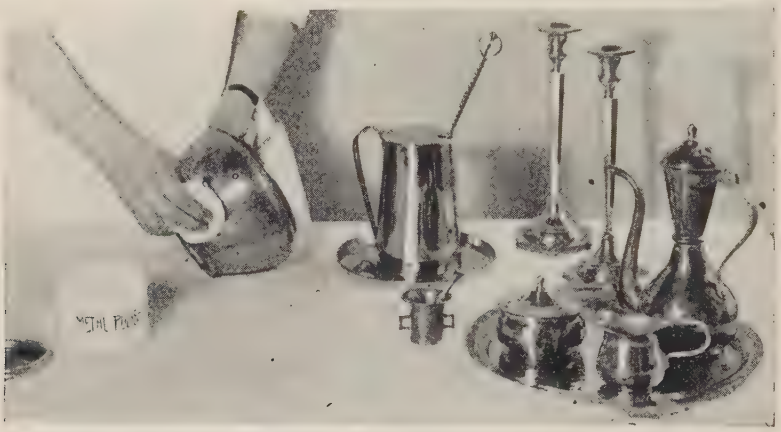


Fig. 31. The beauty of metal reflects its care. Courtesy of Good Housekeeping Institute.

made of soap powder, washing soda, and grit. They vary in efficiency. When in doubt about what to use, try whiting. It does not scratch, and will not injure the metal.

Iron and steel ware should be cleaned with soap and hot water and a scourer such as a bath brick. They should be wiped dry to avoid rusting. If they are to be stored, their surfaces should be coated with paraffin or a fat which contains no salt.

Nickel is best cleaned with whiting and alcohol. Brass

and copper may be cleaned with whiting and alcohol or a regular metal polish for brass and copper such as the Housewife's Metal Polish, which is made as follows:

2 oz. of oxalic acid
½ cup water
1 box electro-silicon
4 oz. of wood alcohol (½ cup)
1 pint of kerosene

Add the acid to the water, mix the ingredients by putting the silicon in a bottle and adding the alcohol, acid, and kerosene. Shake well each time before using. This metal polish is poisonous and should be so marked.

Porcelain and enamelware should be washed with soap and water, and the porcelain then polished with whiting. Enamelware may be cleaned further with washing soda, or an effective commercial cleaner, and water.

Aluminum ware, being slightly affected by both acids and alkalies, is rather difficult to keep in good condition. Vegetables will discolor it, while fruits will brighten it. Strong alkali dissolves aluminum and for that reason lye or washing soda should never be used for cleaning it. Discolorations may be rubbed off with whiting and very fine steel wool or dissolved by the acid of vinegar or dilute oxalic acid. The ware should be thoroughly rinsed after using these acids.

Exercises.—A. Clean utensils made of the different materials. Compare methods used and results obtained.

B. Mrs. Jones' utensils are always bright and clean. She takes great pride in keeping her utensils attractive. What care must she give her utensils to keep them in this condition?

PROBLEM 4.—HOW SHALL WE HANDLE THE LAUNDRY PROBLEM IN THE HOME?

Home Laundering Is Commonly Practiced.—Laundry is one of the necessary tasks of the home which must be done

regularly. It may be done in the home or sent away. "Sending out" the laundry is often expensive and unsatisfactory. For this reason a large number of families care for their laundry at home. The laundry trade in many sections is now rapidly improving its processes to give as careful treatment as the home process provides, so that some believe the time not distant when the commercial laundry will successfully take over this household burden. Practically, in many

FIG. 32. Primitive laundry methods still prevail in some sections. The washing pool at Marseilles, France.

homes today, the laundry must be done at home and its accomplishment is one of the larger household tasks.

Adequate Equipment and Arrangement Facilitates Home Laundry Work.—A definite place should be planned for the laundry and its equipment and supplies. The basement is often used, but where possible, a room adjoining the kitchen on the main floor is to be preferred, as having better lighting and air, and enabling the mother to oversee small children

while doing the laundry. Whatever room is chosen the water and drain should be conveniently located so as to avoid unnecessary labor on the part of the workers. All equipment and supplies should be kept near the work center in a well-protected place.

Built-in tubs, driers, and ironing boards are great aids, but good arrangement may be planned with the common types of equipment. A good washing machine is such a necessity that no home in which laundry work is done should be without one. Since there are many types of washing machines from which to select, a careful investigation should be made before purchasing. All washing machines can be classified into six types: the cylinder type, the dolly type, the oscillating type, the vacuum cup type, the gyrator type, and the washboard type. Regardless of the type, the electrically-driven machine is the most desirable, but water power, where there is piped water under pressure, and even hand power, are much better than a washboard.

Acceptable Methods Should Be Adopted.—Good methods are an aid in doing the laundry work. The work should be standardized and reduced to the easiest and quickest method.

Some women prefer Tuesday to Monday for a wash day because they can arrange their work much better for this day. With a good machine, and plenty of hot water and soap, washing should be a pleasant task.

Carefully sort the clothes, dividing them into piles of similar fabrics and articles. Remove all stains and put those pieces which are very much soiled to soak in warm water to which soap has been added.

Wash all of the white clothes through two suds, the first of which is a warm suds and the second a very hot or boiling suds. In order to make a satisfactory suds for ten or twelve gallons of water use about three-fourths of a

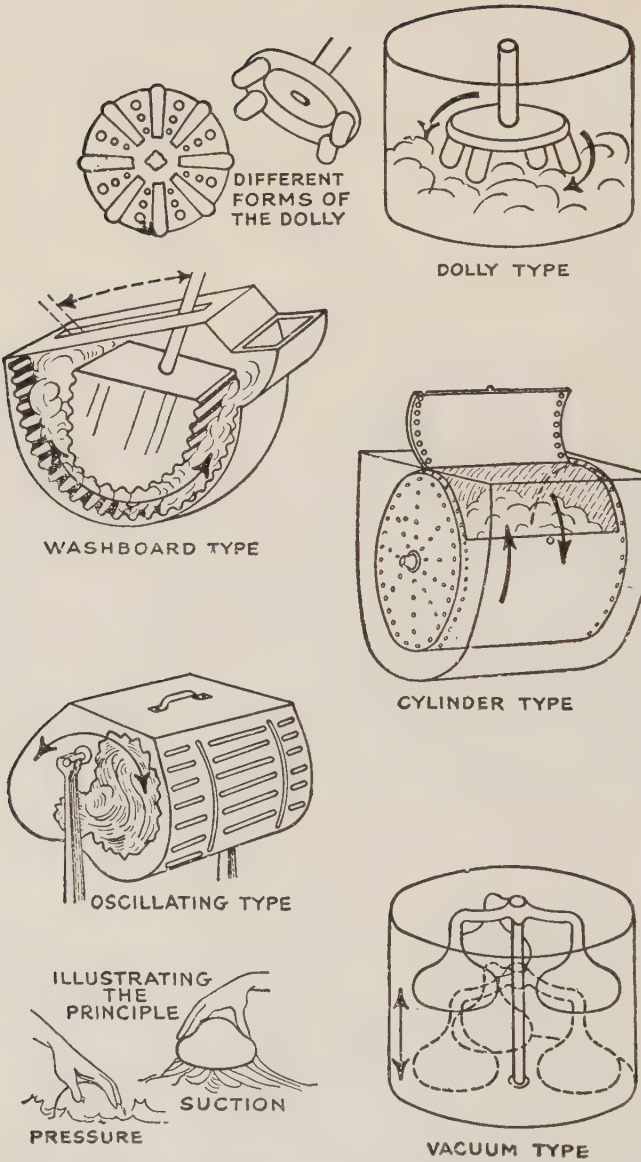


FIG. 33. Diagrams showing chief differences in the washing principles used in the common types of washing machines. Courtesy of Bureau of Home Economics, U. S. D. A.

cup of soap flakes and one-fourth to one-half cup of washing soda, taking care to dissolve them in warm water before adding to the wash water. If the water is very hard, the amount of washing soda and soap should be increased. The machine should run from fifteen to twenty minutes for each load. As the water becomes dirty, draw off several gallons and add clean hot water and soap.

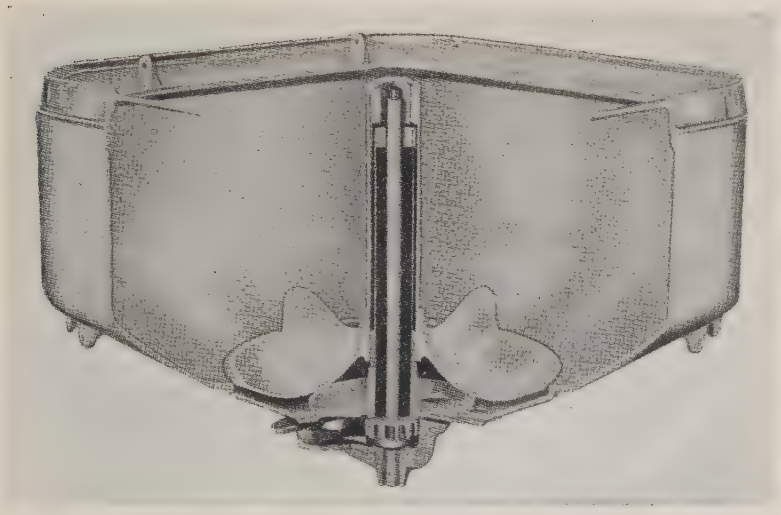


Fig. 34. The gyrator type. Courtesy of Maytag Co.

A hot rinse should follow the hot suds and is best done in the machine. This should be followed by a cold rinse which may or may not contain bluing. If bluing is used, aniline bluing is the best because it will not cause rust or blue spots.

If the washing is small, the second suds will be satisfactory to use for the colored clothes. If the washing is large, prepare a clean suds for the colored clothes. Have this

warmer than the first suds used for the white clothes, but cooler than the second. With the exception of extremely soiled pieces which can be given extra soaking and rubbing with a bristle brush, one thorough washing in warm suds is sufficient for colored clothes.

If any pieces are to be starched, this should be done after the last rinse. By hanging the clothes on the line and removing them carefully, many pieces may be used without ironing. Sheets and bath towels are commonly folded from the line.

Ironing is a slow process but good methods are an aid in doing it. In some homes the work has been materially lessened by the use of an electric ironer, but this equipment is not yet common. The original cost and operating expense limit its use. In the average home, ironing equipment includes an iron of some type and an ironing board. What methods of heating irons do you know?

The height of the ironing board, the freedom of movement of the articles over it, and the condition of dampness of the article to be ironed, all affect the rate of work and the finished product. It is better to dampen the clothes the previous evening or to iron them while still damp from washing. However, if it is necessary to iron them soon after dampening, the use of warm water will quicken the process.

Special Fabrics and Garments Require Special Consideration.—Many fabrics and garments are better not washed in the regular laundry but by the method best suited to them.

Woolen materials should never be washed in hot water. They should not be rubbed but squeezed up and down in suds that feel comfortably warm to the hands, and rinsed in clear water of the same temperature. The suds should be made with a mild soap. When ironed, a cotton material

should be placed between the woolen fabric and the iron. Silk materials are washed in much the same manner as woolen. It is considered best to fold the wet garment in a towel and when nearly dry press on the wrong side with a warm iron. Silk hose and knitted underwear require no ironing.

Lace should be washed in warm soap suds and squeezed up and down in the water until clean. It should be thor-

Fig. 35. Lace curtains in stretcher frames.

oughly rinsed and tinted if desired. It should then be pulled and patted into shape on a flat covered surface and pinned carefully in place with pins placed in upright position. Lace is much better not ironed. Net or lace curtains should be washed in the same manner but are much better dried in curtain frames or stretchers. This method requires no ironing.

Wool sweaters can be laundered easily at home if the correct method is followed. Prepare a "blanket wash" by the following method and use in the place of soap for washing: Dissolve one large bar of mild white soap in three quarts of hot water. When thoroughly dissolved and somewhat cooled, add one-half cup wood alcohol and two tablespoonsful of borax. Use sufficient of this blanket wash to make a good suds. Take the important measures of the sweater and write them down on a slip of paper for later use:

Back and front lengths
Sleeve length
Width of back—
  shoulder to shoulder
  hip to hip
Width of front—
  shoulder to shoulder
  hip to hip
Width of arm
Waist measure if necessary

Use a squeezing motion in washing and do not rub. If the sweater is large and heavy, the washing machine is effective to use. In it the sweater may be washed through two or more suds.

When sweaters are extremely soiled, the use of a detergent is very helpful in cleaning. This is added to the water and "blanket wash" suds. It is made as follows:

1½ oz. castile soap dissolved in 1 pint of hot water. Add 3 quarts water, 1 oz. wood alcohol, 1 oz. ether, 4 oz. ammonia. Stir vigorously.

When the sweater is thoroughly clean, rinse through several clean warm waters. Squeeze out as much water as you can by hand or loosen the wringer and run the sweater through. Place towels or old sheets on a table and on this

well protected flat surface, shape, pat and press the sweater back into shape according to the measurements and leave until dry.

If the color runs or "bleeds," it is often well to rinse until the bleeding for the most part ceases. If the sweater is of such a tint or shade that the running dye discolors the garment, put towels between the folds or double thickness, when pressing the sweater to dry.

The "blanket wash" and detergent are excellent to use in washing any kind of woolen garments or materials.

Exercises.—A. Launder curtains and laces.

B. Launder a sweater.

C. Launder a silk garment.

D. Launder table linen.

E. Make a report on the present laundry equipment at home and suggest desirable additions to it.

F. Keep accurate account of the time required to do your family washing and ironing.

G. Secure a laundry price list and estimate the value per hour of this work done at home.

H. Mr. and Mrs. A have three small children and Mrs. A does the laundry for the family. She has an electric washing machine. What methods should she employ in order to do her laundry effectively and efficiently? What equipment should she have? How can she arrange her equipment to aid her in her work?

I. Lucy Jones has a woolen sweater which she wears to school. She finds it necessary to send this sweater to the cleaners frequently. How can she satisfactorily wash her sweater at home?

PROBLEM 5.—HOW SHALL WE REMOVE STAINS FROM CLOTHING AND HOUSEHOLD FURNISHINGS?

Do you ever recall discarding a garment because of an unsightly stain? Have you ever known a choice table cloth to be ruined by a spot that had become permanent? Almost

every household has a number of garments and articles that are discarded from useful service long before they are worn out because of stains which might have been removed. Suppose a list of these articles for one year reads as follows: 4 napkins, 1 sheet, 1 middy blouse, 3 towels, 1 costume slip, 1 boy's shirt, 7 handkerchiefs. What would you estimate as the loss to the household? Is the family justified in permitting this loss? Would there be a more interesting way of spending the money?

If the housewife is to prevent loss of money through stained garments and house linens, she must understand the nature of the fabric and the stain, in order to choose the best method of removal.

The Nature of the Stain and the Fabric Determines the Method.—In general, household fabrics are classed as cotton, linen, rayon, silk, and wool. As you know, the first three are of vegetable origin, and the other two are of animal origin. What difference does the origin of the fiber make in the treating of the fabric? For example, if grease spots are found on cotton, wool, and silk garments, how does the nature of the fiber affect the treatment?

Perhaps you recall that acids injure vegetable fibers and alkalis injure animal fibers. Very hot water will turn wool and silk yellow. When it is necessary to use an acid on vegetable fibers, only a weak solution should be employed. This should be carefully neutralized by ammonia after the stain has disappeared. Only the mildest alkalis, such as borax, or dilute ammonia, should be used on animal fibers.

Quite as important as the nature of the fabric is the nature of the stain. What can you list as common fruit stains? What metal stains do you know? What other stains have you seen? Because there is such a great difference in

the nature of these stains, as well as in the fabrics, it is impossible to give any one rule for stain removal.

Stains Are Removed by Three Methods.—The stain removers are classed as absorbents, solvents, and bleaches. What do these terms mean? If you drop ink on paper, you may use a blotter which will absorb most of the ink. Common absorbents for stains are talcum, fuller's earth, French chalk, starch, blotting paper, and bolted meal. When absorbents are used, the spots are covered with the powders and allowed to stand for several hours. They are brushed and covered again if necessary. Complete removal is seldom possible through use of absorbents.

Solvents remove the stain by dissolving it. Most of our stain removing is done by use of solvents. Common solvents are water, alcohol, benzine, carbon tetrachloride, chloroform, ether, gasoline, and turpentine. If cold water is used as the solvent, the material is soaked in the water and then washed. When hot water is used, the stained material is stretched over a bowl and boiling water is poured through the stain from a height. The other solvents, alcohol, turpentine, carbon tetrachloride, chloroform, ether, benzine and gasoline are used if water will spoil the material or if the stain will not dissolve in water. The last three are highly explosive and should be used with caution. In using these, place the stain over a pad of cloth, apply the solvent and work from the edge of the stain to the center. It will be necessary to change the under pad frequently.

Bleaches act as stain removers by taking out the color that makes the stain noticeable. For this reason they are only used on white material. Bleaching agents are sunlight, lemon juice, sour-milk, borax, sulphur, oxalic acid, hydrogen peroxide, potassium permanganate, and Javelle water. A

number of short applications of a dilute bleach are safer than a long application of a strong bleach. In using bleaches, place the fabric with such stains as fruit, ink, or iron, over a bowl of hot water, and apply the bleaching agent a drop at a time. When the stain changes color, dip in the water, rinse with ammonia and then with clear water. Javelle

Fig. 36. Proper equipment facilitates ease of stain removal. Courtesy of Good Housekeeping Institute.

water should be used only on white linen and cotton. If potassium permanganate leaves a pink stain, it may be removed with dilute oxalic acid.

Certain Stain Removers Should Be in Every Household.—Many stains occur frequently in the home. What stains would you list as common ones? It is well to have chemicals and utensils on hand for use in removing such stains. A

suggested list of supplies is: Javelle water, potassium permanganate solution, oxalic acid, ammonia water, carbon tetrachloride, French chalk, cream of tartar, a medium-sized bowl, a medicine dropper, a glass rod with rounded ends, several pads of old muslin, and a small sponge.

Javelle water is prepared as follows: one-half pound of chloride of lime dissolved in two quarts of cold water. Dissolve one pound of washing soda in one quart of boiling water. Pour the clear liquid from the chloride of lime into a bottle and mix with the solution of washing soda. Cork and keep in a dark place.

Oxalic acid is a poison and should be so marked. To prepare the solution, dissolve one ounce of the acid crystals in three-fourths of a cup of warm water.

The potassium permanganate solution is prepared by dissolving one teaspoonful of crystals in one pint of water.

A few drops of ammonia added just before using hydrogen peroxide will make it work more quickly.

There Are Accepted Methods for Removing Stains.—When we know the nature of the stain the choice of method is quite simple, but if this is unknown, the procedure should be as follows. First, try cold water, if the fabric will not be injured by water. If this fails, try warm water. If warm water fails, try chemicals, using first those that are fat solvents. Hot water should be avoided in treating unknown stains until other substances have been tried as hot water will set many stains. If the effect of a stain remover upon the fiber or color is not known, test the material by applying a little to a sample or to an unexposed portion of the goods. If the color is removed, it sometimes may be restored by careful tinting or by sponging lightly with pure acetic acid. The following table indicates how common stains may be removed:

Table for Stains

Stain	Fabric	Method	Supplies	Procedure
Blood	All types	Solvent	Lukewarm water	Soak at once and then use ordinary laundry methods
Blood	Heavy fabrics and wool	Solvent	Raw starch paste	Apply to stain and repeat until stain disappears
Bluing	Cotton and linen	Solvent	Vinegar, water	Soak fabric in liquid and wash
Chocolate and cocoa	White cotton and linen	Solvent	Boiling water	Poured from height
			Javelle water, potassium permanganate	Apply directly to stain
Egg	All types	Solvent	Cold water, warm water, soap	Wash in cold water, then in warm water and soap
Fruit	Linen and cotton	Solvent	Boiling water	Apply directly to the stain
Grass	All types	Solvent	Ether or alcohol	Apply directly to the stain
Grease	Cotton and linen	Solvent	Warm water and soap	Ordinary laundry methods
	All types	Solvent	Carbon tetrachloride, benzine	Apply directly to the stain
		Absorbent	Magnesia, commercial	Apply directly to stain and let stand for several hours

Table for Stains (Continued)

Stain	Fabric	Method	Supplies	Procedure
Iron rust	Linen and cotton	Solvent	Oxalic acid and ammonia	Apply acid to tain with glass rod; when stain has disappeared, apply ammonia and rinse with water
Mildew	Cotton and linen	Bleach	Javelle water	Apply directly to the stain
Ink	White cotton and linen, wool and silk	Solvent	Oxalic acid and ammonia	Apply as in iron rust
Chewing gum	All types	Solvent	Benzine or gasoline	Apply directly to the stain
Paint	All types	Solvent	Turpentine, gasoline	Apply turpentine to stain then follow with gasoline

Exercises.—A. Remove stains from garments or household linens. Note the effects in each case. If your results were not complete, explain the probable cause.

B. Last week when Mrs. Smith was doing some repair of the household linens and the family's clothing she found several pieces had some unsightly stains. There were ink, rust, blackberry juice, grass stain, grease, and blood. What steps would be necessary to remove these stains so that these articles may be used again?

PROBLEM 6.—HOW MAY A HOME BE FREED OF COMMON HOUSEHOLD PESTS?

Have you ever known a housewife to be dismayed over the appearance of an apparently never-ending procession of ants in the refrigerator, or the ravages of mice in her linen closet? There is scarcely a home that does not suffer from such invasions at some time. The presence of pests always

brings discomfort, but there are other reasons why they should be eradicated.

Household Pests Are Dangerous Enemies.—They destroy property and are a menace to health. Many of the pests are known carriers of disease.

Science Makes Their Control Possible.—Through study and experimentation, science has discovered means of controlling these pests by prevention and extermination. Have you ever thought of the patient research that had to be done before warfare could be successfully waged on flies or mosquitoes? What would you need to know before you could be sure that you had prevented mice from invading your home? In order to make prevention possible, it is necessary to know the life cycle and food habits of each pest. The first step in a program of prevention is exclusion. Our houses are screened to exclude flies and mosquitoes. Basements are cemented, among other reasons, to exclude mice and rats. What other means of exclusion can you mention?

How effective would the exclusion of flies be, if all the windows and doors were tightly screened except one? If a home had a carefully planned mouseproof basement and still mice were present, what would be probable failures in exclusion? It is wise to plan for total exclusion, but in the use of the home, situations may arise that make this impossible. It is especially difficult to be wholly successful when there are little children in the home. An open door, an unscreened window, can easily undo weeks of caution.

Scrupulous cleanliness is the second step. No food should be left uncovered, crumbs should be swept up, and regular disposal of garbage should be practiced. Dark corners should be kept clean. Cracks and crevices should be filled. Entire removal of the pests' food supply would eliminate them. It is difficult to accomplish this, as their

food habits are varied and not fully known. However, cleanliness does much to prevent easy access to food.

Preventive Measures Should Be Constantly Practiced.—These pests reproduce so rapidly that they are much easier to keep out than to get rid of. Here an ounce of prevention is worth a pound of cure. Sometimes in spite of all precautions and preventives, the unwelcome visitors may come. Measures for extermination are then necessary.

Each Pest Requires a Specific Method for Extermination.—Perhaps of all the household pests *flies* are the most common. They have long been known to spread disease. Have you ever heard of "the typhoid fly?" Later you will study the fly's life cycle, its breeding places, and its bad effect on man's health. It is an enemy to man, and should be fought continually. Screens, swatters, traps, poisons, and insect powders are effective. No clean house will harbor flies.

Mosquitoes, one species of which carries malaria, and another yellow fever, and all of which cause discomfort, should be excluded by screens at the doors and windows. All breeding places, such as ponds and pools, should be drained or oiled with kerosene every two weeks in the summer. Old tin cans, pails, and bottles should be removed, and barrels and tanks should be covered with fine wire netting. A repellent mixture, a few drops of which are placed on a cloth and hung on the bed at night, will drive away mosquitoes. The formula is as follows: oil of citronella, one ounce; spirits of camphor, one ounce; oil of cedar, one-half ounce. Anything that will make a dense smoke will drive away mosquitoes. Pyrethrum powder made into a paste and burned is effective.

Clothes moths are among the most destructive pests in the home. The damage is done by the larva or worm which

develops from the moth egg. Sunlight is a direct menace to the moth. Woolen materials, furs, and feathers should be thoroughly cleaned, brushed, aired, and sunned before they are put away, to dislodge any moth eggs or larvæ on them. Washing the garment in gasoline is effective. Woolen garments so treated may be sealed in bags purchased for this purpose. This protects the garment from further infestation. Camphor, naphtholene, cedar, and tar are all moth repellents, effective if the garments are put away entirely free

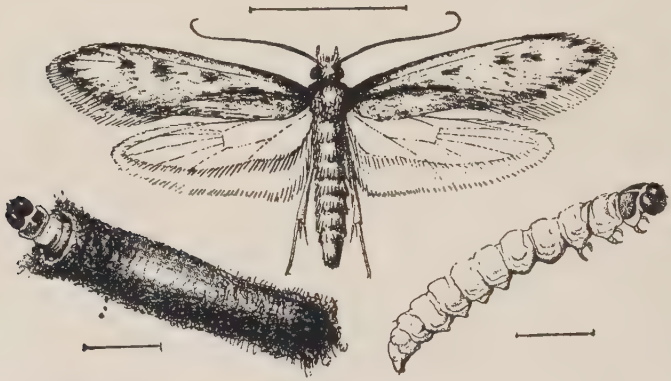


Fig. 37. Case making clothes moth. Above adult, larva at right, larva in case at left. Courtesy of Bureau of Entomology, U. S. D. A.

from moth and moth eggs. If a closet becomes infested with moths, it should be scrubbed thoroughly and sprayed with gasoline, benzine, or kerosene. Moth balls when fresh should be used at the rate of one pound to an average sized trunk.

Bedbugs are found in dusty and undisturbed places. They are easily carried in clothing and are very difficult to get rid of. They locate in the cracks of beds and in the seams and tuftings of mattresses as well as in the walls and woodwork of the rooms. The bed should be gone over with

care and washed with kerosene or gasoline, injecting this well into the cracks. Oil of turpentine may be used in the same way. The bedding may be treated with gasoline. This should be repeated every three or four days for two weeks so that the bugs hatching in the intervening periods may be killed. Boiling water kills both bugs and eggs, but it injures paint and varnish. Corrosive sublimate made into a solution of one part to five parts of boiling water is effective,

FIG. 38. Bedbug in the various stages. (a) Larval skin shed at first molt; (b) second larval stage immediately after emerging from a; (c) same after first meal, distended with blood. Courtesy of Bureau of Entomology, U. S. D. A.

but is a deadly poison and must be used with extreme care. Fumigating with sulphur will kill bedbugs but cannot be depended upon for complete extermination. If bugs continue to appear, all wall paper should be removed, the woodwork varnished or painted, and the walls repapered. Insect powders have been found effective. By placing the powder all along the woodwork, in the cracks of the floor, in the beds, and in the tufts of the mattresses, after a period of several weeks, extermination will be complete.

Cockroaches. Several varieties of cockroaches are prevalent in various parts of the country. They are attracted by dampness, bits of food, and trash of all kinds, and are difficult to exterminate. Sprinkling borax, sodium fluoride, or pyrethrum freely day after day will get rid of them. Sodium fluoride is the most effective of the powders. Phosphorus paste daubed on the inside of small tubes of paper and placed where the roaches commonly appear is another method. Roaches like rancid grease and can often be caught in a pan well lined with grease as they cannot crawl through it. However, if the infestation is heavy, the only dependable means is by thorough fumigation.

Ants are difficult to fight because they are small and come in great numbers. There are many varieties, large and small, black, white, and red. Ants are attracted by various food substances, especially fats and sugars. These foods should be kept in closed containers, and crumbs or small amounts of food spilled on shelves or tables should be cleaned off at once. If it is possible to locate the nest, destroy it by treating with carbon bisulphide, benzine, gasoline, or kerosene. If the nest cannot be found, look for the opening or crack through which the ants enter, and fill it with kerosene. A temporary relief is given by moistening small sponges with sweetened water and placing them where the ants are numerous. After the ants have crawled into the sponges, plunge them into boiling water. A more effective method is to moisten the sponges with syrup made by dissolving one pound of sugar in one quart of hot water and adding one-fourth ounce of arsenate of soda. Some of the ants carry this poisoned liquid back to the nest and feed it to the others there and thus kill the entire colony. The solution is highly poisonous to man and should be used with

precaution. Placing the legs of tables and refrigerators in small dishes containing oil or kerosene is a good practice.

The *silverfish moths* which are injurious to books, papers, and starched clothing are attracted by starch. One teaspoon of powdered white arsenic mixed with one-half cup of flour may be made into a thin paste by adding boiling water. This is spread on small pieces of cardboard and placed where the silverfish moths have been found. Pyrethrum and sodium fluoride are useful in controlling these insects. Both the arsenic and sodium fluoride are highly poisonous to man.

Centipedes may become a nuisance in bathrooms, moist closets, cellars, and around heating pipes. They should be exterminated. Pyrethrum powder will aid in getting rid of them.

The *buffalo moth or carpet beetle* is destructive to woolen goods. The damage is done by the larvæ which are particularly active in the summer and fall, although in furnace heated houses their activity may continue throughout the year. The adult, a small beetle with black and white mottlings and an irregular reddish stripe down the back, may be found feeding upon the pollen of flowers. It does no damage in this stage but it may enter houses through cracks or crevices and deposit eggs which later hatch into active brownish worms or larvæ that may work havoc upon carpets or other woolen goods. There is no entirely reliable remedy for this pest. When once it has gained entrance to the house, long continued efforts are necessary if it is to be eradicated. The appearance of the carpet beetle suggests that carpets be replaced with rugs. Crevices under the base boards and cracks in the floor should be thoroughly cleaned out and treated with benzine and then filled with a crack filler. Repellants are of little value but fumigation has been found effective.

Rats and mice are very destructive and increase rapidly. They are also known to be carriers of deadly diseases. All openings through which they would be likely to enter houses should be closed or screened. Holes should be filled with a mixture of cement, sand, and broken glass or crockery, or

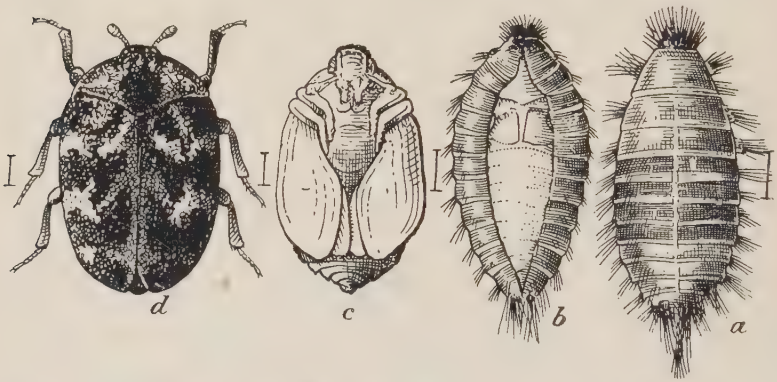


FIG. 39. The common carpet beetle in the various stages. (a) Larva, dorsal view; (b) pupa with larval skin; (c) pupa, vertical view; (d) adult. Courtesy of Bureau of Entomology, U. S. D. A.

FIG. 40. Typical carpet beetle damage to woolen cloth. Courtesy of Bureau of Entomology, U. S. D. A.

covered with a sheet of metal. Traps of various kinds should be used continually. Poisons are effective but must be used cautiously in order that the lives of children and animal pets be safeguarded. Poison should never be used if there is a toddler in the house. Barium carbonate is a cheap effective poison. Make a dough of one part of

barium carbonate and four parts of meal or flour, or make a stiff dough of oatmeal with one-eighth of its bulk of the barium carbonate. Barium carbonate spread on fish or moistened toasted bread, or on ordinary bread and butter, makes attractive bait.

Strychnine is quicker, but more dangerous. Strychnine sulphate is the best form to use. A few crystals inserted on the point of a knife into pieces of raw meat, wiener wurst, or toasted cheese is good bait. If arsenic is used, mix one pound oatmeal, one pound of coarse brown sugar, and one teaspoon of arsenic. Keep this mixture in an earthen jar. A tablespoon of this mixture placed where rats have been usually results in their mortality. Few cats are really efficient ratters. An Irish, Scotch, or fox terrier is usually a good rat dog if properly trained.

Regardless of what the pest may be, eternal vigilance is the price paid for its prevention and extermination.

Exercises—A. Exterminate some pest in your home or in the school laboratory.

B. Write a theme on why we should rid our homes of household pests.

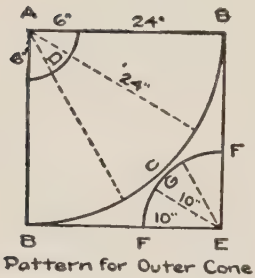
C. Last Sunday evening when Mrs. K went to serve some cake to a number of guests she found her cake completely covered with ants. Looking further she found that ants were in the refrigerator. How can she get rid of these pests?

D. Construct a fly trap. The following directions for constructing a home-made fly trap are issued by the Extension Service of the Washington State Agricultural College

The Home-Made Fly Trap.—The materials needed in constructing the home-made fly trap are: old scissors, a pair of old kid gloves to protect hands while working on wire, a thimble, a tape measure, needles, sizes 5 to 9, pins, No. 8 black thread, pliers, white chalk, a strip of muslin one yard long and one inch wide, 3½ feet of 34-inch wire screen, soft

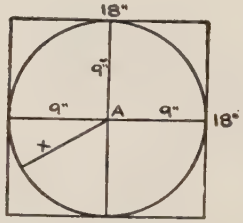
wire No. 12 or 14, and some sewing wire. This material will cost less than thirty-five cents.

Making the Outer Cone of the Home-Made Fly Trap.—Fasten the strip of muslin to the piece of white chalk. Measuring back from the chalk, indicate a six-inch, nine-inch, eighteen-inch, and twenty-four-inch distance on the muslin. These measurements are used when cutting curved lines.



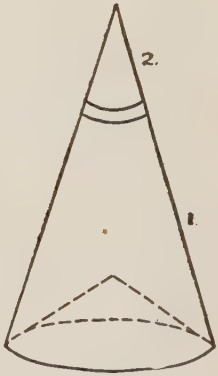
Pattern for Outer Cone

Fig. X.



Inner Cone Pattern

Fig. Y.



The fly-trap completed.

Fig. Z.

Lay the wire on a flat surface and measure from corner (a) twenty-four inches to each of corners (b); then cut the curved line (c) from (b) to (b). (Fig. X)

Measure back six inches from corner (a) and cut curved line (d). (Fig. X)

Join cut edges (ab) overlapping one inch and sewing together firmly with heavy thread or fine wire. Measure back ten inches from corner (d) to (f) and cut curved line (g) from (f) to (f). (Fig. X) Join cut edges (ef) overlapping so that the line (gf) of the small cone will fit firmly over the

large cone. Sew these edges firmly and bind the edges with tape, denim, or any heavy material.

Making the Inner Cone of the Home-Made Fly Trap.—Lay the wire on a flat surface and cut an eighteen-inch square. Measure nine inches from the center (a) to all four sides of the eighteen-inch square and cut a circle of wire. (Fig. Y) Cut out section (x) about 1-8 of the circumference, leaving enough wire to make edges of the cone fit the finished lower edge of the outer cone. Overlap the edges and sew firmly with millinery lock stitch.

Completing the Home-Made Fly Trap.—Place the inner cone inside the outer cone and fasten to a wire. Make an opening about the size of a lead pencil through the tip of the inner cone to form an opening and push the ends of the wire upward. (Fig. Z)

Setting the Home-Made Fly Trap.—Elevate the cone slightly and place a shallow dish containing syrup or other food which readily attracts flies under the cone.

Emptying the Home-Made Fly Trap.—Plunge the trap into boiling water, after which remove the small cone (2).

E. The word or words which complete the meaning of the following statements are listed in the column to the right. Can you find the correct words for these blanks?

1. The care of the home is a ———— of every member of the family.
2. A ———— and ———— attitude makes doing the home tasks enjoyable.
3. ———— walls may be washed with warm soapy water made with a mild soap.
4. The bowl of the bathroom stool should be ———— frequently.
5. Closets should be ———— and ———— frequently.
6. ———— require laundrying every month or two.

1. Painted
2. Comfortable
3. Mahogany
4. Aired
5. Refrigerator
6. Cheerful
7. Scoured
8. Exclusion
9. Responsibility

7. ———— and ———— furniture require much care.

8. The ——— — should be kept clean and dry.

9. Careful use of all utensils increases their ————.

10. Aluminum ware may be cleaned by using dilute ————.

11. ———— of equipment makes home laundry work easier.

12. Wool garments should be washed in ———— made with a ————.

13. The method of removing a stain is determined by the nature of the ———— and ————.

14. ———— stain is removed by alternate applications of dilute oxalic acid and ammonia.

15. ———— of pests is the first step in their control.

16. The house must be well cared for to be a ———— place for the family.

10. Walnut
11. Wearing qualities
12. Rust
13. Good arrangement
14. Oxalic acid
15. Warm suds
16. Fabric
17. Plan
18. Dusted
19. Stain
20. Mild soap
21. Willing
22. Mildew
23. Curtains
24. Papered

Additional Problems and Exercises.—1. Care for the cleaning of the walls and windows in your home.

2. Clean the registers in your own home. Report the results.

3. Dry clean a garment.

4. What are the advantages of doing the laundry at home?

5. Clean a rug.

6. Clean the entire house.

7. Clean the bathroom.

8. Outline the steps in cleaning a room.

9. Plan the arrangement of your household linens in a closet of three shelves.

10. Make a study of the effect of soaps, high temperatures, and strong alkalis on wool, silk, cotton, linen, and rayon.

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UNIT FIVE

PLANNING THE USE OF TIME

Introductory Studies.—1. Compute the number of hours a day your mother works for the family.

2. How many hours a day do you spend in house work?

3. What do you consider a reasonable amount of recreation per week for a mother? Should a mother have a definite time daily for recreation? Is it possible? If so, how much time should she allow?

4. What do you consider a reasonable amount of daytime rest for a mother? For a father? For a child of ten years?

Presentation of the Unit.—The time of family members rightly employed is an important asset to the family income. The housewife or other members who market and prepare meals, do the laundry, make their own garments, and can their own vegetables are increasing the income just the same as the members who daily go from the home to earn money.

How much is your mother's labor worth in actual dollars to the family? Have you ever tried to figure it out? Suppose your mother should become ill, how much would you have to pay for help to do the work which she regularly does? It is only when we are faced in life with such problems that we realize how valuable our time is.

Each family member's time has value, and children who, by helping with the tasks of the household, reduce the amount of money paid out for hired help are contributing to the family income. Some families are able to make their income go much farther than other families because of the time which is given to productive work.

Have you ever heard the statement, "Time is money"? In what way would you regard this as true? Time is like

money in that only by careful planning can each day yield full returns. Just as it is easy to allow some one need of the family to take more than its rightful percentage of the income, so certain tasks seem to take more than their due of time. To reduce such tasks requires thought and study, but the results are well worth the effort. The time of the family should be budgeted or planned just the same as the income. Housewives who do their work efficiently are those who plan their time carefully. The time schedule or budget is a guide for the family to enable its members to accomplish more easily the necessary household tasks. If properly made, this budget will result in the saving of time and will add to family peace and harmony.

What shall we do with the time saved by this means? It shall not always be used for more work, but frequently can best be used for rest, leisure, and recreation. These are activities that are often neglected in our family life today.

PROBLEM 1.—WHAT IS THE VALUE OF THE HOME-MAKER'S TIME?

It is very difficult to answer such a question directly. Every day spent by any person has in it potential values in several lines. It has possible economic value, in that through the work of the day goods may be produced which add to the world's wealth. It has possible social value, in that through its activities the welfare of people may be advanced. It has also personal value, in that only as each day yields its satisfactions and joys to the individual, can she have her share of happiness. With these various factors involved, it becomes most important for the individual and the group that the time be well spent.

Why is it more difficult for a home-maker to use her time well than it is for a worker in a factory?

Her Tasks Are Numerous and Varied.—Home-making is called an unspecialized vocation because it is made up of many widely different tasks that the home-maker must perform. Her work includes those duties which require the highest type of managerial ability as well as those which require very simple skills. She often must undertake several things at one time. If you would write down a list of all the tasks which your mother did today you no doubt would be surprised at the great variety. No two days are ever alike, and no day can be wholly predicted. There are in the home certain tasks that must be repeated daily in order that the family be kept well and content.

Some tasks are done each week and others are seasonal. Where tasks are repeated frequently they are called routine work. Dishwashing, laundry, meal preparation, and cleaning are all routine jobs and the time used in doing these should be reduced to a minimum, through careful planning and development of skill.

A Part Consists of Directing the Household.—This is called management and a high type of ability is required to do it efficiently. Management consists both of planning and executing, and occurs when decisions must be made. The meals must be planned, the clothing must be arranged for, and the children must be trained. The directing of the household is very similar in many respects to the directing of a business. Ninety-five per cent of the cost of running the homes of this country is entailed by the housewives. Such expenditure requires managerial ability.

Many tasks in the home must be done by the children if they are to have proper training, and if they are to share in making the home. In the satisfactory direction of the

work activities of the home, managerial ability is essential. Too often these varied responsibilities without managerial ability result in a long working day for the home-maker.

Her Day Frequently Exceeds Eight Hours.—The eight-hour day is commonly designated as the limit of hours man should work to earn his livelihood. This day has been accepted as legal in industry. What advantages does such a plan have? What vocations have its protection? Do you know of any occupation that does not? The eight-hour day has not been found long enough for the home-maker to care for her family without help. Studies have been made which showed that the average mother uses 5 or 6 hours each day in giving her baby ordinary care. Many home-makers work until late into the night in order to do all the work which must be done. It is evident that in such cases an adjustment must inevitably be made, or the health of the housewife will suffer, and the standard of the family will be lowered. The tired housewife at the end of a 12 or 14 hour day is in no condition to enjoy her family.

The Value of Her Time Depends Upon Her Activities.—If you were to estimate the value of the home-maker's day, on what basis would you proceed? Perhaps the first thing you would do would be to list her home-making activities, stating the amount of time spent in each. You would then multiply the time spent at a given task by the price that would be paid for such work in your community. For example in a western village, the estimate might be made as follows:

3 hours dishwashing @ $0.25	$0.75
2 hours sewing @ $1.00	2.00
4 hours cooking and cleaning @ $0.35	1.70

and so on through the various items. The hourly wage would be much higher in our larger cities. What possible

errors would there be in such a study? Perhaps the first is that it is impossible to give any just evaluation of the time spent in managing and directing the home. Another error is that no value is given to having her always on hand and available to do the unexpected tasks.

A Partial Estimate of The Money Value of a Kansas Farm Woman's Work During Thirty Years.

235,425 Meals @ 20c. per meal	$47,085.00
2,989 Garments @ $1.00 apiece	2,989.00
29,200 Loaves of bread @ 5c. per loaf	1,460.00
3,120 Cakes @ 20c. per cake	624.00
6,240 Pies @ 10c. per pie	624.00
3,620 Jars of fruit @ 10c. per jar	362.00
211,825 Pieces of laundry @ 3c. per garment	6,354.75
21,900 Hours of sweeping @ 25c. per hour	5,475.00
90 Weeks of home nursing @ $15 per wk.	1,350.00
	$66,323.75
Money value for one year	$2,210.79
Money value for one month	$184.23

A Definite Money Value Cannot Be Assigned.—Although some of the household tasks may be listed in terms of money value, a great portion of the home-maker's service cannot be measured in such a manner. Upon her rests much of the responsibility for the growth of family affection, the development of ideals, and the training of the children. Such service cannot be bought for any amount of money.

Exercises.—A. Determine the cost of your mother's services in your home for one month if replaced by hired help.

B. What services does your mother render which could not be secured from hired help?

C. Mr. and Mrs. B have three children, a boy eight, a boy eleven, and a girl, three. Mrs. B does all of her own work and finds her day is well filled with tasks. Last fall Mrs. B was ill for several weeks, and hired help was necessary in the home. The money cost to the family was

great and there were many tasks left undone. After Mrs. B was well again Mr. and Mrs. B made an estimate of the value of Mrs. B's time. What estimate would you put on a month of Mrs. B's time?

PROBLEM 2.—HOW CAN THE HOME-MAKER BEST USE HER TIME?

The Home-maker's Day Should Be Carefully Planned.—Have you ever watched campers pack and load their cars? Do you remember wondering how all the various utensils, the pails, the beds, the tent, etc., could be packed away and still make room for the family? The skillful home-maker, like the skillful camper, must accomplish difficult feats. She must pack into her day the routine work, the unexpected demand, the emergency guest, and so on, and still make room for her family. The camper has found that by combining things wisely, packing compactly, and placing things of like nature together, both time and space can be saved, and the job completed in a shipshape manner.

A similar plan of procedure is of equal help to the housewife. If she passes from one job to another, without system and plan, she cannot help being conscious of the confusion and disorganization of her work. It becomes her master and she has a sense of being driven by it. A schedule is a means of relief. No hard and fast rules can be set up for schedules because each person must work out her own. Whether it is better to wash the dishes and clean the kitchen before attending to the other part of the house or whether the living-room should be cleaned and dusted first must be decided upon by the worker. To make the schedule most effective, plans should be made for the children and other members of the household also. Schedules for all paid helpers are necessary and the planning of these is a responsibility of the home-maker. The old saying, "Plan your work, and work your plan," holds for the housewife.

Daily, Weekly, and Seasonal Tasks Should Be Included.—The daily schedule should include a list of all the routine work of the day in the order in which it is to be done, and an approximate estimate of the amount of time which will be required for each task. All special tasks should be provided for in a similar manner. The weekly plan should make provision for all routine work, specifying the work for each day. As near as some families have ever come to having a work schedule is to stipulate that Monday shall be wash day. Further planning for each dav would be distinctly helpful. The seasonal schedule should plan the special work by weeks. For example, in the middle west, the months of August and September may have for their special work the canning and preserving of food. The months of March and April may have for their special work the spring sewing. Provisions in the plan for seasonal work is most important.

Every schedule should allow ample time for doing the work, with some leeway for interruptions.

Frequently housewives make the mistake of planning more than can possibly be done in the amount of time given. Time should be planned for a certain amount of recreation each day. The housewife will be happier and more efficient if this is done. A vacation period should be planned for in the seasonal schedule.

The Plan Should Be Followed.—A time schedule will be of little value unless it is followed. Some housekeepers plan carefully but fail to base their work on their plan. The plan should not drive the worker until it becomes a burden, but should guide and direct her in accomplishing more work in less time and with less effort.

The first plan made probably will not be entirely satis-

factory, but by using it, the defects and errors can be readily determined and the schedule changed accordingly.

Suggested Schedule for Mother, whose family consists of Self, Husband, and Three Children, Ages one, two and a half, and nine years.

6:00—Arise; heat milk for baby; put cooked cereal to reheat.

6:15—Feed baby; dress self and second child. Oversee other child as he dresses. Put baby's washing in machine.

7:15—Put fruit, milk, cream, butter, and bread on table set the night before. Start coffee.

7:30—Breakfast. Oldest child helps put breakfast on and clear it off.

8:00—Wash dishes, oldest child helps.

8:20—Make beds. Wipe up floors of bedroom with dust mop. Dust bedroom furniture; put bathroom in order and do any special work.

10:00—Feed baby, and put her in the open air.

10:15—Dust and put in order living-room and start preparing for lunch.

11:00—Bathe baby; put baby in bed. Finish preparing luncheon.

12:15—Luncheon.

1:00—Wash dishes. Sweep kitchen floor and back porch.

2:00—Feed baby; put her out of doors again.

2:15—Take 20 minute nap or rest and dress.

3:00—Take mending or sewing into the living-room with the children or do any special work.

5:00—Start dinner.

5:30—Give the younger children their dinner and put them to bed.

6:30—Dinner for family.

7:15—Wash dishes and set table for breakfast with father's help.

8:00—Oldest child goes to bed.

Schedule for Special Activities

Monday	—Dust, sort clothes, and bake
Tuesday	—Wash, fold or sprinkle
Wednesday	—Iron, mend, put away
Thursday	—Clean upstairs, shop, sew, or work in garden
Friday	—Clean downstairs
Saturday	—Clean kitchen, bake, and cook
Sunday	—Church

Improvement in Practices Should Be Sought.—Much of the work of the housekeeper is routine work which must be repeated often and regularly. Whenever it is possible to reduce operations to routine, much time can be saved.

In industry, by careful study and standardization of jobs and processes, increase in production at less cost has been accomplished. Housekeepers too can profit by such methods. Have you ever studied yourself to see how long it takes you to make your bed or wash the dishes? Have you ever observed how many motions you make in doing either of these? A very good way to improve your practice is to study yourself and see if you can reduce the number of your motions and also the time. A home-maker who became interested determined to do this and as a result was able to do her dishes in one-third of the time previously required. She also found it possible to care for her cream separator in fifteen minutes, where before she had been requiring twenty-five minutes. All routine work can be so standardized. Many women are worn out at the end of the day from useless motions and needless walking.

Use of a Schedule Has Been Helpful.—Every home-maker desires to do her work effectively. She wishes to have time to enjoy her family. She wishes the satisfaction that comes with the mastery of a difficult task. In accomplishing these things, a schedule to guide her work has proved helpful. Unorganized work becomes distasteful to the woman who has learned to master her tasks by planning. Rarely, if ever, does a woman who has established a schedule drop back to haphazard ways.

Exercises.—A. Plan a daytime schedule for a mother with one baby.

B. Plan a week's schedule for a mother with two children, 8 and 11 years old.

C. In your school laboratory make a time and motion study of some household activity.

D. Read: Cabot, *The Call of the Job.* Apply his seven points of the job to house work.

PROBLEM 3.—HOW DO EQUIPMENT AND ARRANGEMENT AFFECT THE USE OF TIME?

Equipment May Save or Consume Time.—Equipment may be so complex in its construction that it is an extravagance in the household schedule, regardless of the financial factor. On the other hand, through the use of certain equipment, the housewife may free a large amount of time and reduce her active labor to such an extent that the article can be considered as adding to the income. Equipment should be purchased only if it will save time and energy. Many pieces of attractive equipment little used do not indicate a well-equipped kitchen.

Height of Equipment Is an Important Factor.—Many housewives make the mistake of paying no attention to the height of their equipment and working surfaces. A low working surface means a crouched, uncomfortable position. One should be able to stand erect at her tasks. For persons of medium height (five feet, six inches) the tables for work while standing should be about thirty-three to thirty-eight inches high; kitchen sinks about thirty-four to forty inches to the top; and wash-tubs about thirty-six to forty inches to the top of the tub. The ideal method is to adjust all surface heights, when being installed, to your own height and measurements, finding what seems most comfortable. There should always be a high stool so that as much work as possible may be done in a sitting position.

Equipment Should Be Arranged in Units.—The arrangement of equipment is very important and may consume or save time. Convenience requires that the arrangement be

FIG 41. The height of the working surface may be readily tested.
Courtesy Edith Holmberg

planned according to work units. It is very helpful to group together the tools that belong to a process. Shelves and drawers placed near the sink or table make it possible to group tools for convenient work. Laundry equipment should be placed together as should cleaning equipment. If one has dairy products to care for, all equipment necessary for this work should be grouped in a unit. This plan also should be followed with other work of the home.

Fig. 42. A convenient kitchen. Courtesy of Edith Holmberg.

Work Units Should Bear Proper Relations to Each Other.—The kitchen must be considered in relation to the dining-room. There should not be too great a distance between the place where the food is prepared and where it is consumed. In preparing and serving food certain distances must be traveled. It is necessary to go from the work table to the pantry, from the pantry to the ice-box, from the stove to the sink, and so on, many times. It is readily seen that these units should not be far apart if the

housekeeper is to be efficient. Draw your kitchen to scale and locate your equipment as you now have it. Recall the trips you make in preparing any one dish when you get a meal. Draw lines connecting the equipment and keep track of the number of times you walked these distances. By this method you will discover whether your kitchen arrangement is the best possible for you. You may find that a little

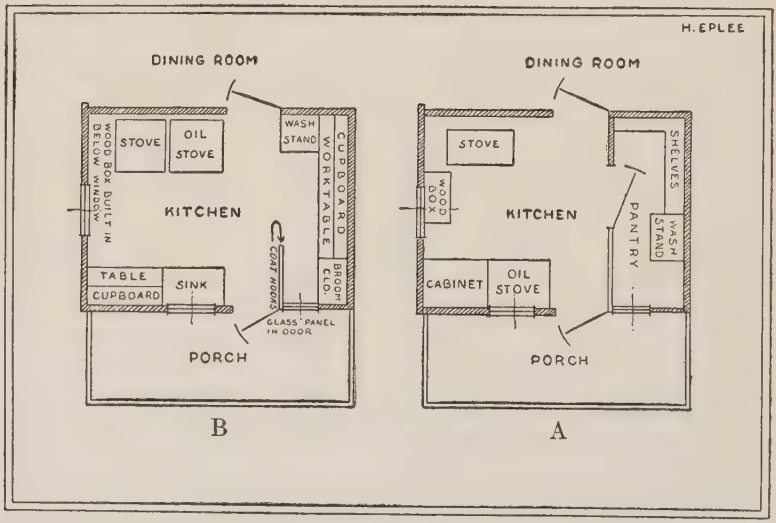

Fig. 43. The rearrangement of a farm kitchen from A to B resulted in a saving of two hours' time in the daily work of meal preparation and a daily saving of 528 steps. Courtesy of Edith Holmberg.

careful thought will lead to changes through which a large amount of time may be saved.

Many times the refrigerator is located in an inconvenient place as related to the kitchen. The refrigerator should be thought of in respect both to the trips made to it in the meal preparation and those for the ice-filling. Do you empty waste water from melted ice? If so, could a drainage pipe be installed?

Because of the desire to save steps, kitchens are being planned much smaller than formerly. One hundred and twenty square feet make sufficient floor space for a kitchen.

Many housewives have found replacing the pantry with built-in shelves, cupboards, and bins in the kitchen, close to the work tables, sink, and stove a great aid. A two-story house should have a complete set of cleaning tools for each floor. Many trips down or up the stairs may be avoided and a stimulus may be given the children to keep their rooms clean by this means. This is economy in the end although the first cost may be more.

Step Saving Devices Should Be Employed.—Is it not strange that although we are living in the "ride age" many women doing housework never think of it? Often women who would not walk four blocks under any consideration walk many times that distance daily in their trips from the kitchen to the dining-room. It is just as important for the housewife to save herself unnecessary steps as it is to save dollars and cents.

One of the first essentials in saving steps is an adequate water supply. This is possible even where city water is not available. Rearrangement of equipment and other necessary changes also should be made. A window may be cut in the wall between the kitchen and dining-room, and a shelf added. Or if the cupboards and china closets are built in, openings may be arranged for on both the dining-room and kitchen sides. A simple and convenient change for saving steps is to put castors on the legs of the work table. If the table does not have a shelf below, have one put on if possible, for the resulting improvement is worth many times its cost. In large institutions the cook does not waste his time and his employer's money by hunting and assembling his equipment, for it is all located on his table,

convenient for his use. Housekeepers may well profit by his plan.

A wheel table or a tea cart is another aid to the housekeeper. Once she has used one she regards it as indispensable. Expensive and beautiful ones may be purchased but a satisfactory one may be constructed at home for a few dollars. A small kitchen table with a bottom table surface and some rollers or old tricycle wheels are sufficient to make one. A tea cart will save many journeys from the kitchen to the dining-room, for in one trip the necessary dishes and food for a meal may be carried on it. Women should learn to regard any device which saves labor, steps, and energy as a legitimate investment for family well being.

Exercises.—A. Determine the proper working height of kitchen and laundry equipment for yourself.

B. Plan the arrangement of your kitchen equipment into work units.

C. Outline a plan of work by which a housewife can save steps in preparing a meal or making a bed.

D. Report on a water system for a country home.

E. Plan and draw to scale a conveniently arranged kitchen.

PROBLEM 4.— HOW CAN THE INDIVIDUAL MEMBER'S SCHEDULE CONTRIBUTE TO FAMILY LIFE?

A Fair and Equal Distribution of Tasks May Be Effected.—Not only should the housewife have a time schedule, but all members of the family should have one if the work of the home is to proceed harmoniously and with ease. It is impossible for one person to do the entire work of the home for the whole family even though that one person be willing to take this burden. The only fair way is to distribute the tasks in an equitable manner and then each member has a chance to contribute in some way to the maintenance of the home.

Time and Stress May Be Saved.—If each member has his particular work to do there is no loss of time in determining who is to do the work. Much quarrelling and unpleasantness over family duties may be avoided if individual schedules are planned. If each member knows her work she can make plans for doing it and also study means and methods of improving her practice.

Sense of Responsibility May Be Developed.—When a person knows just what work she has to do and makes plans for it she develops a sense of responsibility which is very valuable to her. Many people shun and avoid responsibility and are quite willing to let others carry the load. Children who have been brought up without assuming any responsibility often find themselves at a loss when suddenly called upon to face a difficult situation. If the home is to provide for the growth of its members, provision must be made for the development of a sense of responsibility.

Personal Effectiveness May Be Increased.—The effectiveness of each family member may be increased by the use of such a schedule. Have you ever known a person to postpone doing a task persistently, dreading to undertake it, yet knowing it had to be done? A doctor reports one boy as being worn out from overwork when all he had to do was to carry two pails of water 60 yards from the well to the house every evening. He began in the morning to think of ways or means of avoiding his task. As a result it was before him all day long. Can you imagine what this boy's probability of success will be when he grows up?

Doing tasks as they come, alloting one's time so that various duties may be met, can be learned through use of a personal schedule. Further, there comes that very important lesson that *coöperation* leads to *effectiveness*. A person who does a task at a given time, even though delay might

be more convenient, has had training that will be useful to him in work, and in play all his life.

Exercises.—A. Plan a time schedule of the larger tasks for your own family for a week.

B. Plan a time schedule for yourself. Follow it for one week and report results.

C. A friend the other day suggested to Mrs. Smith that a time schedule for every member of her family would be a great help. How would you help Mrs. Smith plan such schedules?

D. Which of the following statements are true? Which are false?—

1. The labor of the family members, other than the father, has no value in actual dollars to the family.

2. Many families are able to stretch their incomes farther because much productive work is done by the various members.

3. Housewives who do their work efficiently are those who plan their work carefully.

4. The home-maker's tasks require little thinking, and are made up of many simple jobs.

5. The home-maker is responsible for the spending of most of the income.

6. The home-making duties for a family of several children can easily be done by the mother in eight hours each day.

7. Much of the home-maker's service cannot be measured in terms of money.

8. A good plan of work will drive the worker so that she will accomplish all that is possible in the day.

9. A good rule to follow is to purchase equipment only if it will save time and energy.

10. A low working surface insures a comfortable position to the worker, thereby increasing her efficiency.

11. Many housewives find that by arranging their equipment in units much time is saved.

12. A wheel table or tea cart is a means of saving steps.

13. Unpleasantness over family duties should be avoided by allowing every member to work when he desires.

14. The mother and older members of the family are entirely responsible for the work of the home.

15. Persistently postponing the doing of tasks renders them more pleasant to do later.

16. Each member of the family needs a personal time schedule.

17. Following a time budget makes possible time for leisure and rest.

18. The time of family members rightly employed is an asset to the family.

Additional Problems and Exercises.—1. What activities require the major part of a woman's day? How may the time required for these be reduced?

2. Make a time and motion study of some household activity in your own home and report the results.

3. How may you schedule your time so that you may use it to better advantage?

4. How does the age or the number of children in the family affect the time schedule? Suppose there is an infant in the home?

5. Make a list of desirable "short-cuts" in housekeeping practices which will lessen the time required of the home-maker.

6. Analyze a home activity and chart the route the housewife follows. Estimate the number of steps she takes in carrying out this activity. Plan how she can lessen the number of steps necessary.

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Frederick, Christine, "Household Engineering." American School of Home Economics.
Taber, C. W. "Business of Household." Lippincott.

Suggested Bulletins and Leaflets for Teacher and Student:

McIlroy, C. B. "Simplifying Home Sewing." Agricultural Extension Bulletin 127:1–28, 1925, Cornell University, College of Agricultural Division of Extension, Ithaca, N. Y.
"Time Saving Cookery." McCall's Magazine, N. Y. C.
"Time Schedule for the Mother with One Baby." FL–307, Two cents. Woman's Home Companion, 250 Park Ave., N. Y. C.
"Time Schedule for the Mother with Three Young Children." FL–308. Woman's Home Companion, 250 Park Ave., N. Y. C.

UNIT SIX

PROVIDING FOR ADVANCEMENT AND HIGHER-LIFE NEEDS

Introductory Studies.—1. What magazines are desirable for the family? What considerations enter into the decision?

2. List the books you have read during the past year. Which ones did you like best? Would you recommend every family owning these books? Why?

3. Write a paragraph describing the picture you would like best to own if you could have your choice.

4. What victrola records do you prefer?

5. What did your school books cost this year?

Presentation of the Unit.—It is commonly said that the expenditures of a family providing for its advancement are far more indicative of the character of the family than are the expenditures for clothing. You will recall from our previous study of the budget that expenditure for advancement included health, savings, education, recreation, and similar items—all the personal "outgoes" exclusive of material items for housing, food, clothing, and housekeeping. With the exception of those for health, the expenditures for advancement are a matter of personal choice. It was because of this that Mrs. Ellen H. Richards called this part of the budget the "Region of Choice." Families and their members differ so much in what they desire for advancement that no universal rule can be laid down for these items.

The returns which are included in advancement are, after all, the things which give life significance. The pleasure from material things is soon forgotten but the pleasure which comes from the development of the mental,

spiritual, and social sides of the family is lasting. Taber says that the most important advancement expenditures are those for education and recreation. Suppose you make a list of your family expenditures, in the last week, that would be listed under advancement. Were every one of these included in your plan? Would you repeat them again? It is only by careful analysis that we are able to decide those expenditures by which we will profit most.

Regardless of what may be the choice, the provision for the advancement and higher life needs of the family is a definite responsibility. Although this is the last item in the list, it should not be left to chance or to the "here-is-what-is-left-now-spend-it" method. Each member should be considered in the plans. In some families the advancement is arranged for the adults; in other families it is arranged for the children. Either of these is a dangerous practice to follow if well-balanced family life is to be maintained. When each member's needs have been provided for as well as is possible with the income available, family happiness will be possible. Then, also, will be increased the effectiveness of the family in the community

PROBLEM 1.—HOW SHOULD A FAMILY EXPRESS ITS HOSPITALITY?

The Hospitality Should Be in Keeping with the Family Income.—Every family at some time or other extends hospitality. It may be in the form of food partaken of by guests in the home, it may be in visiting or playing games, or it may take the form of some other pleasantry or social intercourse. Whatever the form chosen, the hospitality should be in keeping with the family income.

Large expenditures for elaborate forms of hospitality are in extremely poor taste and such functions rarely fur-

nish as much pleasure and enjoyment as do the more simple forms of entertainment. You may know of some family that deprives its members of necessities in food and recreation in order to put on some expensive affair with which the members hope to outdo their friends and acquaintances.

A lady who believes in simple entertainment in keeping with the income was having guests for dinner. Her little son was planning the good time he would have. A friend, to tease the lad, said, "You'll not have nearly as fine a dinner as we had." The little fellow replied quickly, "Who cares about the dinner? The fun isn't in the food." The boy had the right idea.

Many times it is possible to have a much happier evening over a cup of tea than over a heavy, expensive meal. The custom of serving large amounts of food as a means of expressing hospitality is not to be recommended. A commendable plan is to budget a definite amount for all entertaining, then you will not be unbalancing your budget by unwise expenditures.

There Are Many Types of Hospitality.—The family must make its choice of the form which it desires to use. Parties, receptions, dinners, teas, and week-end entertainments are common. Some of the less elaborate affairs consist of spending the afternoon or evening in auto drives, tennis bouts, and calling. Many people feel that they have not properly extended their welcome unless something to eat or drink has been offered. They feel that fellowship comes through eating together. The expression of hospitality will depend upon the finances of the family and the interests and tastes of the guests.

Extending and Accepting Hospitality Should Afford Mutual Pleasure.—Hospitality should not be offered because it must be done to pay back some social debt. If you cannot

Fig. 44. Table set for Sunday night supper, showing electric grill and proper placing of a beverage service for any occasion.
(From *Table Service and Decoration*, by Lillian Gunn.)

accept hospitality in a happy spirit and with a thought of the joy of extending your hospitality to the person, whose guest you are at the time, you had better decline.

Having guests in your home should always bring you pleasure. The reason why some families find entertaining guests in the home an undesirable burden is sometimes due to the false standards which the family may have for its

FIG. 45. In the olden days, ladies courtsied and gentlemen bowed with hand on heart when the hostess was greeted. Courtesy of *Forecast*.

hospitality. If a housewife must spend two or three days preparing for her guests food that will be consumed in an hour, and then is too tired to enjoy her friends, it is small wonder that she cares little for guests.

Knowledge of the Rules of Etiquette Is Desirable.—The rules of etiquette are the means of helping people to conduct themselves with ease in their social and business relations. Certain conventions and forms have existed for

centuries, but of course these have changed just as civilization has. It is usually said that the rules of etiquette are founded upon custom and convenience, and should be governed by common sense. What do you think of the statement, "One's manners are the index of one's family life and character?"

In the home, opportunity for familiarity with the rules of etiquette should be presented. Through this means, boys and girls readily acquire table manners, and the ability to accept and decline invitations, to introduce strangers, and to participate in social affairs.

Family Coöperation Is Essential.—Every member has a responsibility toward any guest in the home whether he is a guest of the entire family or of one individual. The members should do everything in their power to make the visit delightful and pleasant. Children should give their parents' guests as much consideration as they do their own. No home is truly hospitable unless everyone is coöperating and doing his part in expressing the family's pleasure in its guests.

Exercises.—A. Class give a tea for the mothers.

B. Class give a party for elderly people.

C. Write a formal and an informal invitation and acceptances.

D. Ethel, age 13, wishes to have a party. Her mother says that she may have $3.00 for this purpose. Ethel desires to invite 20 friends. How can Ethel plan this party?

E. May's mother frequently has guests in her home. What should be May's attitude toward these guests? How can she help her mother entertain her guests?

PROBLEM 2.—WHAT KIND OF RECREATION CAN A FAMILY AFFORD?

Recreation Is Secured in Various Ways.—Recreation refers to the games, play, or pastimes which refresh or revive

people after work and which help to keep them physically fit. It is sometimes separated from amusement and entertainment, but usually these activities are classed as mental recreation. Baseball, football, golf, hiking, camping, swimming, and driving a pleasure car are all forms of recreation as are the theater, lectures, reading, and parties. Each family should select the ones most suited to its needs and interests. What is recreation for one family may not be for another. The farmer who walks over a one hundred and sixty acre farm regularly will hardly be interested in golf for his recreation. To some the theater brings recreation, while others find it in classical music. No matter what form the recreation takes, all families are better off physically and mentally when they make provision for a reasonable amount of wholesome recreation for their members.

No Relationship Exists Between the Cost and Pleasure Afforded.—Some forms of recreation are very expensive while others cost little beyond the expenditure of time and energy. Expensive recreation may give the least pleasure and inexpensive the most, for there is no relation between the amount of money spent and the enjoyment received. Sometimes a hike planned on the spur of the moment brings far more fun than an expensive week-end outing. In recreation as in other family activities, it is most often the association and comradeship with friends that bring enjoyment.

Recreation Should Be in Keeping with the Income.—This is always a safe and sane rule. Each family or person should estimate the amount available for recreation at any particular time and then plan accordingly. What provision did your budget make for recreation? Indulging in any form which comes at too high a cost is undesirable. In such

a case the good results of recreation are likely to become bad results. Many people have gone "recreation mad" and are neglecting their business and educational interests in order to play with the crowd.

A Car is Often an Expensive Means of Recreation.— A car is apt to be an expensive means of recreation for

FIG. 46. Receiving their club charter. Boys and girls club movement provides opportunity for education and recreation. Courtesy of Kansas State Agricultural College.

families living on moderate incomes. Investment and upkeep may make a car a luxury. When we are confronted with figures showing the number of people driving cars and not owning their own homes, and the large per cent of cars not paid for, we wonder who can really afford a car. There is no doubt but that a car makes possible the enjoyment of interesting types of family recreation, and when the car is within the family means it may furnish recreation at a small cost. However, many families find that a car increases expenditures in unexpected ways, so that their recreation

allowance becomes overbalanced. Before purchasing a car the family should ask itself the following questions:

1. What will be the yearly loss through depreciation?
2. What will be the garage bill?
3. What will the operating and repair expense total for the year?

FIG. 47. Children and their elders enjoy picnics together.
Courtesy of Boys and Girls Dept., Kansas State Agricultural College.

4. Will the recreation budget be sufficient to meet these expenses and still provide for other needs?

The statement is frequently made that the operating and repair expense of a car averages at least one dollar per day. Is this true in your family? How large an income must a family have to spend thirty dollars per month for one form of recreation? What means can you suggest by

which the maintenance cost of a car can be reduced to meet the recreation budget of a family of moderate means?

Family Recreation Costs Less Than Individual.—Family recreation usually brings more pleasure at a lower cost than individual. Families generally choose picnicking, reading, camping, outings in the park, and similar types of recreation. These forms are inexpensive and are a source of real enjoyment to the family members. The individual who is not in a family group finds these forms impossible. She is apt to make larger expenditures of money for a trip to some resort or to the mountains, or for an afternoon at the theater, in order that she may have needed recreation.

Through organizations it is sometimes possible for the detached individual to participate in outings, camps, and hikes with a group which furnishes recreation not unlike that of a family.

Exercises.—A. Outline the recreation for one year for a family of five whose income is less than $2,000.00.

B. What has your own recreation cost for the past month? What has that of the family cost?

C. If you have a car, determine what the operating expense for it has been the past month.

D. Mr. Brown is the County Attorney. He, his wife, and son of high school age, live in their own home in the county seat, a town of seven thousand. They are considering the purchase of a family car. Mr. Brown's salary is $2,800. What can they afford to pay for a car? What factors should decide their choice? What agreement should the family have about its use?

PROBLEM 3.—HOW CAN THE EDUCATIONAL NEEDS OF THE FAMILY BE MET?

Each Member of the Family Has Educational Needs.—The necessity for education is greater than was that of families a generation ago. In the past the individual's education was considered finished at adolescence, but now

it is considered just begun. There is no period in life when a member of the family has no educational needs. Scientific tests have shown that until they are fifty or older adults can learn as easily as children. Both children and adults must have opportunity to meet these educational needs, and the state has recognized this by schools and universities, and by extension teachers and home study for adults.

Every individual has the problem of "making a life and making a living," as it is sometimes phrased. For children the problem of education involves not only that knowledge and outlook on life that will give joy in its activity, but also the program of education and training for self-support. Many adults have need for further training in their vocations, that their enjoyment in their work and their earning power may be increased, as well as a need for help in developing a philosophy of life.

The home that seeks to meet the educational needs of its family must realize what those needs are and what responsibility it has in meeting them.

People Do Not Always Realize These Needs.—Families frequently do not understand their educational needs and make no provision for meeting them. They see no reason for an education. Books and magazines are expensive luxuries for them. When we talk about educational needs we do not necessarily mean that everyone needs a college education, but that everyone needs an education which will train him to the best of his ability to meet effectually life's responsibilities.

Realization of the Need and the Opportunities Is Essential.—Only as the family members realize the educational needs and know something of the opportunities offered, will the needs in this respect be met. The public schools offer training in many lines to the children for twelve years,

and provision is made after the elementary school for choosing as a vocation the work best suited to the individual. For those who wish to enter the professions, state-supported colleges are provided. For those who go to work before completing high school many states provide the part-time school. For adults who need more special training for their work the evening school and extension teaching provide

FIG. 48. Mothers and daughters find opportunity for continued training. Courtesy Kansas State Dept. of Vocational Education.

unlimited opportunity. Thousands of men and women throughout the United States are availing themselves of the training offered in these forms of continued education for adults.

Public libraries, art institutes, and museums in many communities are daily offering great educational opportunities. Some one recently said that at the rate we are going

it will not be possible much longer to be uneducated and untrained.

The Home Must Supplement These Facilities.—Even though the free educational provision seems adequate, the

FIG. 13. Rural boys and girls find educational opportunity in the 4-H clubs whose activities are directed by the state colleges or universities. Courtesy Kansas State Agricultural College.

home is not relieved from a very definite responsibility for the education of its members. To keep a boy or girl in high school for four years entails an average yearly cost (nine months) of $500 to $600.* In addition to the state's expenditure, the yearly minimum cost (nine months) for

*These figures are based on the average food allotment of sixty cents per day; on a clothing allotment of $20.00 per month; on a personal allowance allotment which includes $7.00 for spending money and school dues per month; on a housing allotment of $9.00 per month; on an allotment of $4.00 per month operating expenses.

a boy or girl attending college in a midwest, state-supported school, ranges from $600 to $900. In metropolitan centers the cost may be $1,000 to $1,250 for a year in college.

The expense for a college education cannot be added to the family's budget for the year without throwing it out of balance, unless provision has been made through previous savings.

The educational needs of the adult members of the family should not be overlooked, even though they may be overshadowed by the larger costs for educating their children.

Exercises.—A. Determine what it costs on the average, in your community, to send a girl to high school for her freshman year. In addition to school expenses, include all living expenses.

B. What kind of a *start in life* should a child expect to have? What can a young man or young woman hope to accumulate by the time of high-school graduation? In what way?

C. What high-school subjects would you advise a girl to take? Explain your reasons.

D. Mrs. L was a stenographer before her marriage. She now has three children and must make their clothing as well as attend to their other needs. She knows little about sewing and less about training children. Where can she go to obtain this information and training which she needs so badly?

PROBLEM 4.—WHAT IS ADEQUATE PROVISION FOR MAGAZINES, BOOKS, AND MUSIC FOR THE FAMILY?

Magazines, Books, and Music Contribute to Family Pleasure.—Had you ever thought that each magazine on the rack in your home is there because it was supposed by some member to furnish certain satisfaction? The Wild West magazine is thumbed over and over by the young brother in search of adventure; the woman's magazine with stories of romance always ending in bliss is eagerly read by sister and grandmother; the trade journal forms the bulwark

of father's evening; and the daily paper is in demand by the various members, from mother to the baby. What satisfactions do the family members secure from their magazines and papers?

Perhaps the satisfaction that is most frequently cited is that magazines and papers bring the interests of the outside world to the family. Equally true is the statement that "one loses one's self in the printed page." Through the fiction of daring adventure and romance the uneventful day gains color, and the desire for release from the humdrum existence of every day is gratified. What dangers are there in the magazine or paper that, by its vivid portrayal of facts or fancy, furnishes the excitement of the day? Will the family bookshelves show as wide a variety as the magazine-rack?

Upon what basis do you select a book you would like to own? If your home is near a public library, you may be able to enjoy books and magazines with very little expense. It is difficult, however, for the literature read in the public library to make the contribution to the family pleasure that it might furnish if read in a home where it could be easily shared. If there is no public library available a book loaning club can be organized by neighbors or by other persons associated together.

In your home is the provision for music as adequate as the provision for reading? Owning a piano does not mean that the family has adequate provision for music. Unless some member of the family plays it in a way to give pleasure to the group, it is a doubtful investment. With instrumental music in schools, more individuals are learning to play different musical instruments and family and neighborhood orchestras are becoming common. This is most hopeful, but for all families other means for music now are avail-

able. What points do you see in favor of various kinds of mechanical music? What would you regard as the handicaps of each?

Books, magazines, and music should be provided for in the budget. What is spent in your home for magazines each year? For books? For music? Do you regard the amounts as adequate? Books, magazines, and music have a part in family life just as food and shelter have. Provision should be made for these needs in the budget. Just how much will be spent depends on many factors, such as the income, the availability of surplus from other sources, and the interests of the family. Few families can afford to spend more than $50 a year for the total of these needs. The more limited the budget for these items, the more essential careful planning becomes. The family that has little to spend should not allow the itinerant magazine subscription collector to choose its magazines, nor should the haphazard buying of magazines as one passes the newsstands be accepted as a satisfactory procedure. Injustice, because the needs of all are not really met, inevitably results when either of these methods is followed.

The Choice Should Include the Interests of All Family Members.—Have you ever known of homes that had ample reading material for the adults, but made no provision for the children? If the habit of reading is to be developed, it is necessary that opportunity for it be afforded in childhood. The coming of a magazine in one's own name often is a great stimulus to childish interest. Similarly the choice of records should include all the family's interests. A poor balance between jazz and classical music, or instrumental music and ballads may prevent the talking machine from affording the satisfaction it should to all members of

the family. Does this also hold for the radio? Upon what basis shall the choices be made?

The Influence Should Be Constructive.—If the literature read, whether current or classical, interprets life to the individual and truly emphasizes those forces that give

FIG. 50. Music in home life by all the family. Used by permission of John C. Bostlemann, Jr. director of the Aeolian Hall School for Music Research.

life significance, it is constructive. The story of love so strong that it swept away all sense of obligation and duty and went on to inevitable tragedy may, if well told, be constructive. The story of a life, or a period, portraying truly the events, may be a means of broadening understanding or of giving inspiration.

How would you judge the constructive force of music? What effect does blatant music or stories of impossibly successful or nauseatingly "good" people have upon you? Like vulgar stories, these things have no constructive force in life. Since books, magazines, and music have a definite part in forming ideals, the family should not leave their choice to chance.

Exercises.—A. List the magazines and books which you would purchase for your family if given $15.00 for this purpose.

B. List the talking machine records which you would purchase if given $5.00 for this purpose.

C. Find prices of different musical instruments which individuals might well learn to play.

D. The Allens have a son fifteen and a daughter thirteen. They have $50 this year to spend for magazines, books, and music. How shall they plan their selections and purchases?

PROBLEM 5.—WITH WHAT LAWS AND BUSINESS PROCEDURE SHOULD THE HOME-MAKER BE FAMILIAR?

Many Laws Have a Bearing upon the Home.—The laws in our country are based upon our federal constitution, and the constitutions of the individual state. In these documents certain powers are assigned to the federal government, and other powers are retained by the individual states.

Each state has control over the citizens living within its boundaries, and also over non-citizens who are living or are engaged in business there. Each state passes its own laws, and the laws of one state are rarely the same as those of another state. Do you know a law of your state which is different from a similar law in a neighboring state? Families moving to another state are frequently confused by the change of laws. Many of the laws are concerned with the home and family. The state recognizes the importance of

these institutions as the foundation of government, and makes conscious effort for their protection. The home-maker should be familiar with the laws of her state and especially those dealing with the home and family. Many expensive mistakes are made because of ignorance of the law. Women have been known to sign away their entire property rights because they knew nothing of the state laws.

Some of These Laws Deal with Property Rights.—What kinds of property do your parents own? The list may include your home, its furnishings, an automobile, bonds, farm, insurance, and money on deposit at the bank. Which of these items will be listed as real estate? Which will be listed as personal property? In order that property may be transferred, it is necessary that legal proof of ownership be established. This protects both the owner of the property and the possible purchaser.

Although persons without legal training cannot know every provision of the laws in regard to real estate, there is certain information concerning the responsibilities and rights of owners that should be understood by the home-maker. The importance of seeking expert legal advice on such problems is emphasized by such knowledge.

What can an owner do with real estate property? He can sell it, mortgage it, lease it, rent it, or will it. In order to do this intelligently, he must understand how the ownership may be transferred legally in his state. How is this done in your state? What part does the register of deeds have in it? What is meant by an abstract of title? Before purchasing, one should have the title examined to make sure that it is perfect in every respect.

The owner can mortgage his property. What is meant by a mortgage? It is a pledge of real estate as security for

a loan of money for a specified period of time, at a legal rate of interest. The mortgage is a "dead" deed to property which becomes living and effective for its transfer to the party loaning the money in case the loan is not repaid at its maturity. All mortgages must be recorded by the register of deeds. Mortgages usually run from three to five years. If the loan is not paid, the mortgager may be foreclosed by court action and the property sold publicly to satisfy the debt. The procedure for this is established by law. Usually the state makes provision so that the owner may redeem his property within a given period of time. If the mortgage is paid, a release of mortgage should be given which when filed with the register of deeds will clear the title of the property.

The owner may rent or lease his property. What is the difference? Do people who do not own their own homes rent or lease in your community? What obligations has the owner in such a transaction? What are the obligations of the lessee, or the renter?

The owner may will the property as he chooses, within the limits of the law. How is a will drawn up? A will is the formal disposition of one's property made as prescribed by law and taking effect at the death of the person making it. It should be signed in the presence of witnesses who are not interested in the terms of the will, nor mentioned as beneficiaries of it. A lawyer's advice and help is advantageous in making a valid will. Have you ever read a story in which the plot centered about the finding or the destruction of a will?

Some of These Laws Deal with Personal Rights and Obligations.—Such laws deal with marriage, divorce, rights and liabilities of husband, wife, and children, adoption, and

other contracts. Does it seem strange that laws should be necessary to safeguard these intimate relationships of people? Unfortunately many people regard their personal obligations less seriously than they do those involving property. Since the permanence of the home is of vital importance to the state and nation, laws have been planned to safeguard it. These are not the same in every state, and so many people believe that federal laws covering these matters should be enacted. It would be necessary to have an amendment to the constitution to include these matters in the provisions of the federal government.

What advantages do you see in having uniform laws on marriage and divorce in all states? How does the proposed Child Labor Amendment to the Federal Constitution affect the home? In your state, who may legally perform the marriage ceremony? What steps are necessary to make a marriage legal and binding? The home-maker should obey but should not acquiesce in laws that she deems unsatisfactory. Both the responsibility for a clear-cut idea of desired laws and the campaign for betterment rests with her. Constant effort toward conscious improvement will bring definite returns to the homes.

Knowledge of Certain Business Procedure Is Necessary. —The time is past when business knowledge is needed only by the husband and father. Today every member of the family makes business transactions. Children early open savings accounts and women in the home do most of the buying.

The bank is so commonly used for handling our money that knowing how to proceed in opening accounts, depositing money, and writing checks is very important. One should know something of the status of a bank before selecting it

as a place to do business, and should take time to investigate its condition.

What method have you of judging whether a bank is safe? What different kinds of banks are there in your town? Having chosen a bank, the next step is opening an account. Why would it be a help to have a responsible person introduce you to the banker? The bank has a form to be filled out which gives information of residence and occupation, and the signature of the person opening the account. This is placed on file for identification purposes. When money is to be deposited in the bank a deposit slip is made out. Provision is made on the slip for the name of the person, the date and the nature and amount of deposit. Compare deposit slips from several banks. Are there any differences?

The deposit slip, the money to be deposited, and the bank book are handed to the teller, and the entry of the amount is made. The person opening an account is given a book of blank checks. On these blank checks he writes the order for the bank to pay a certain amount of money to some one. The order is signed by the depositor. What precautions must be taken to safeguard the checks? What advantage is there in paying by check? How many checks would probably be required for paying the ordinary monthly household expenses? What kind of monthly checking up should be done on the bank account? These and many other questions show the importance of good banking practice. Sometimes it is not possible to settle an account by check. If money is paid, a written receipt should be obtained in order to protect you against having to pay a bill the second time. When some business problem arises and you do not know the correct procedure, go to some reliable business man or other responsible person for information, but do not rely upon strangers or transients.

Exercises.—A. Outline the steps in depositing and drawing out money from:

1. checking account in a bank
2. savings account

B. How do you keep account of your bank balance?

C. What are five specific laws which have an effect upon the home?

D. Mr. and Mrs. G have moved to another town. Mrs. G wishes to open an account at one of the banks. What procedure should she follow? How can she know if the bank is safe?

E. Mr. and Mrs. G wish to make a joint will. How shall they do this? Would you advise them to make a will? Why?

F. Which words or phrases make each statement correct?

1. The hospitality of the family should (a) be elaborate, (b) give pleasure to the family, (c) be in keeping with the income, and (d) include only the adult members of the family.

2. Suitable form of entertaining for a ten-year-old girl is (a) a picnic, (b) afternoon party, (c) formal dinner, (d) tea, and (e) slumber party.

3. Family recreation usually consists of (a) dinner dances, (b) picnics, (c) hotel luncheons, (d) camping, and (e) outings in the park.

4. The educational needs of the family are being met by the (a) city library, (b) public schools, (c) country club, (d) part time schools, (e) bridge clubs, (f) Chamber of Commerce, (g) evening school.

5. An owner can (a) sell, (b) lease, (c) use for harmful purposes, (d) mortgage, (e) rent, (f) use for immoral purposes, and (g) will his real estate property.

6. A marriage to be binding requires (a) a license, (b) ceremony performed by a minister, (c) bride's parents present, (d) two witnesses, (e) bride and groom of legal age, and (f) a prenuptial announcement.

7. A bank may be judged by (a) the heavy iron bars on the door, (b) the church membership of the president, (c) the personnel of the officers, (d) the published statement, (e) the kind of bank, and (f) the patrons of the bank.

8. A magazine may be judged desirable for the home if it (a) costs twenty-five cents, (b) is read by many of your neighbors, (c) has stories by good authors, and (d) has attractive illustrations.

Additional Problems and Exercises.—1. List some considerations and attentions which add much to the comfort of a guest in the home.

2. What is your responsibility toward your father's or mother's guest?

3. Plan and carry out a family evening in your home.

4. Make plans for preparing a room for a guest.

5. Plan and prepare a family picnic.

6. Entertain twelve of your friends at a cost which does not exceed $2.00.

7. Make a file of games and ways to entertain.

8. Determine how much it costs to raise a child to high school age in your locality.

9. What determines the amount and type of entertaining which is done in your home?

10. Determine the amount of your family income which is available for books and magazines and music, and with this amount plan a list for your family.

11. What are your state laws regarding marriage?

12. What are your state laws regarding the adoption of children?

13. What is the correct procedure in paying accounts at stores?

14. How may the home-maker in her home obtain more training for her vocation? Inquire of local schools; consult catalogues of the State College and University as to the extension courses offered; list the books in the local library; make an additional list of six books to be recommended to the library.

Books for Class Reference:

Andrews, B. R. "Economics of Household." Macmillan Co.
Bevier, I. "Home Economics in Education." J. B. Lippincott Co.
Dept. Food Economics and Nutrition, Kansas State Agricultural College, "Etiquette and Service of the Table."
Donham, S. A. "Spending the Family Income." Little, Brown & Co.
Faculty South Philadelphia High School, "Every Day Manners." Macmillan Co.
Gunn, L. M. "Table Service and Decoration." J. B. Lippincott Co.
Rust, L. and Pittman, M. "Table Service for Busy Families." State Dept. Vocational Education, Topeka, Kan.
Starrett, H. E. "Charm of Fine Manners." J. B. Lippincott Co.
Taber, C. W. "Business of Household." J. B. Lippincott Co.
Taber, C. W. and Wardall, R. A. "Economics of the Family." J. B. Lippincott Co.
Post, Emily. "Etiquette." Funk & Wagnalls Co.

Suggested Bulletins and Leaflets for Teacher and Student:

"At the Table." Delineator, N. Y. C.
Avery, E. C. "Table Service." Me. Agr. Ext. Bul. 165:1–12, 1927, Orono, Me.
"Birthday Parties for Tiny Tots." McCall's Magazine, N. Y. C.
"Birthday Parties. Twelve Parties—Planned for Signs of Zodiac and a Children's Party." Delineator, N. Y. C.
"Book of Manners." Includes information about weddings. McCall's Magazine, N. Y. C.
"Bride and Her New Home." A list of leaflets and books on wedding preparations. FL–332 Woman's Home Companion, N. Y. C.
"Bride's Recipe Show." Delineator, N. Y. C.
"Cooking for Crowds." Fifty recipes for serving twenty-five people. Delineator, N. Y. C.
Cox, Florence C. "Playgrounds of the Nation." Bul. No. 20, Bur. Edu., U. S. Dept. of Int., Washington, D. C.
"Engaged Girl's Booklet." Showers and Announcement Parties. Woman's Home Companion, N. Y. C.
"Entertainment." The Children's Party Booklet. Outdoor and Indoor Fun. Woman's Home Companion, N. Y. C.
"Etiquette Charts." Wedding—How to Prepare. The Wedding Day—Ceremony and Reception. Teas—Informal and Formal. Giving a Dinner. Manners and Graces in Public Places. When You Dance. Table Manners. McCall's Magazine, N. Y. C.
"Etiquette of Afternoon Tea." McCall's Magazine, N. Y. C.
Gunn, Lillian M., "Table Service and Decoration." J. B. Lippincott Company, Philadelphia, Pa.
"Holiday Dinners." Menus, recipes, and decorations for festive dinners, teas, and a luncheon. Delineator, N. Y. C.
"Hostess Entertains Her Club." Delineator, N. Y. C.
"Journal Parties." Ladies Home Journal, Phila., Pa.
"Leap Year Parties." McCall's Magazine, N. Y. C.
"Manners at the Table." Delineator, N. Y. C.
"Masquerade Costumes." Home Pattern Company, N. Y. C.
"Mother Goose Garden Party." McCall's Magazine, N. Y. C.
"Motor Supper." McCall's Magazine, N. Y. C.
"New Hospitality." Correct Table Service. McCall's Magazine, N. Y. C.
"Parties for All Year." McCall's Magazine, N. Y. C.
"Parties for Young Girls." McCall's Magazine, N. Y. C.
"Parties for Everyone." Ladies Home Journal, Phila., Pa.
"Play and Recreation—Outline for Study, No. 92." (Separate No. 3, from Child Care and Child Welfare, preparation in coöperation with

Federal Board of Vocational Education.) Second edition. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.
"Sandwiches for Parties." Seventy-five recipes. Delineator, N. Y. C.
Speakman, M. T. "A Brief Manual of Games for Organized Play adopted from Standard Sources." Rev. ed., Children's Bureau, U. S. Dept. of Labor, Washington, D. C.
"Three Parties." Bridge, Announcement, and Going Away Parties. Delineator, N. Y. C.
"Weddings." Delineator, N. Y. C.
"Wedding Anniversaries—How to Celebrate Seventeen Different Kinds." Woman's Home Companion, N. Y. C.

Vacation Information:

"Battlement National Park." U. S. Dept. Agr., Forest Service, Washington, D. C.
"Casa Grande National Monument, Arizona." U. S. Dept. Int., Natl. Park Service, Washington, D. C.
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"Oregon Caves, Siskiyou National Forest." Southern Oregon, Josephine Country. U. S. Dept. Int., Natl. Park Service, Washington, D. C.

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UNIT SEVEN

THE RELATION OF HOME TO COMMUNITY

Introductory Studies.—1. What are some ways in which parents may show their interest in the school?

2. What are some ways in which teachers may show their interest in the homes?

3. Make a list of the organizations and societies to which members of your family belong.

4. Star those which are active in meeting community problems.

5. What health regulations have been passed by your town or city council or county health authority?

6. What steps have been taken in your community to encourage beautifying home grounds?

7. What traffic regulations are in force in your community?

8. Write a paragraph describing "Our Best Citizen."

Presentation of the Unit.—What constitutes a community? Perhaps the first idea that will flash into your mind is that a community includes the area about a trade center where people do their buying and selling. It may be that you will think of it in terms of a township or city ward. There are many communities that are centered about other group interests. What are these? Perhaps the most common are the church and the school. It is important for the family that its home be established in a community that has economic assets. If there is no industry to tax, if farms are unproductive and business conditions are stagnant, there is little possibility that the home can have from the community the coöperation it needs. There is for the community, as for the home, a certain sum below which its expenses cannot be reduced, and still make available to its citizens the protection and help that are essential for their

well-being. Perhaps you have seen deserted mining villages, or logging camps with one or two families yet remaining. How will the economic and civic condition of the place affect these families?

These conditions are extreme. In most of our communities the economic status is such that the provision for church, school, and other group undertakings is possible.

FIG. 51. This municipal swimming pool serves as a recreation center for the entire community.

Further, in a large number of our communities, the citizens have a feeling of civic pride and interest. Has your family ever moved to a new location? What questions did you hear discussed concerning the new community? If you were to consider moving, what considerations should govern your choice?

Usually the school is one of the first considerations. The community spirit is evident in the provision made for

its children. Often the next question is in regard to the church. Few families desire to live in a churchless community. In a way the attitude of the community towards its school and church exemplifies its ability to coöperate in other regards. The schoolhouse is really a symbol of a partnership between the people and the state for the training of those who are to be leaders in the community in a few years. The church steeple is a symbol of the partnership of a people with God, that religious ideals may be fostered.

Any partnership involves duties as well as privileges. If the home is to have the opportunities afforded its members by public schools, it must loyally meet its responsibilities in the partnership. If the church brings to the people of the community a sense of God as "the force making for righteousness," the homes should give their willing support to this wonderful partnership. If the home is to coöperate with these various institutions it is essential that the desired aims be clearly understood. The state desires good citizens.

PROBLEM 1.—WHAT CONSTITUTES A GOOD CITIZEN?

Have you ever given this question consideration? We hear so much today about good citizens. Do we really know what it means? One of the responsibilities of the home is to see that its members are good citizens.

A Good Citizen Is Law Abiding.—The Constitution of our country and those of our states guarantee to our citizens certain rights and require certain duties. Laws are made to make possible the rights and to protect us in performing these duties. Every good citizen obeys the laws and gives his help in enforcing them. He also knows and understands the laws which affect him and his occupation as well as his

community. A large amount of our taxes goes to pay for expenses incurred by law-breaking citizens who cannot distinguish between liberty and license.

THEODORE ROOSEVELT IN HIS LIBRARY AT OYSTER BAY

FIG. 52. Theodore Roosevelt is held by many to exemplify good citizenship.

A Good Citizen Cooperates in Community Enterprises.—He likes his community and takes an active part in making it a good one. When an enterprise is started by the community he does his share to bring about success. Each

of you probably has in your community a person who objects to every plan undertaken. He is usually the one who never contributes anything but "knocks." This type of citizen adds practically nothing to the community.

A Good Citizen Assumes His Civic Responsibilities.—He is informed in regard to the affairs of his country, state, and community. He votes and casts his vote for the best interests of all. He may or may not seek office but at least is willing to serve his community in whatever way he is capable of doing. A good citizen has civic pride and shows this by making conscious effort to improve his community. He is desirous of serving equally as well in time of peace as in time of war.

A Good Citizen Fosters High Ideals for the Community.—He is not satisfied with things as they have always been. He desires good recreation and entertainment for his community. He does his best to obtain the highest type of schools. He is interested in libraries and other educational facilities. He wishes to discourage dishonesty, idleness, and vulgarity. He wants a beautiful community for people to live in, and is willing to limit his own wishes, if by so doing the greater good will come to the group.

Exercises.—A. List twelve duties of a good citizen in your community and give your reasons for including each in the list.

B. In what ways may home-makers be good citizens?

C. Mr. S is often called the best citizen in town. Make a list of the things which you believe he must do in order to be rightly so named.

PROBLEM 2.—WHAT RESPONSIBILITY HAS THE COMMUNITY FOR ITS FAMILIES AND THEIR HOMES?

Although the home has definite responsibilities for the community, it in turn must give something to its citizens

if its existence is to be justified. If the community has a real contribution for its members, it deserves the effort put forth for its maintenance.

The Community Affords Protection.—The community furnishes protection of life and property to its citizens. Protection of life includes health work, prevention of accidents, and supervision of dangerous occupations and other possible sources of physical harm. Protection of property includes security through ownership, and prevention of

Fig. 53. The city secures safe passage for its citizens by means of the traffic policemen.

theft and destruction of property. When men must take the law in their own hands to protect themselves there is much waste of life and property and small social advancement. Freedom which comes through the guarantee of personal and property security increases the enjoyment of life and makes progress possible.

The Community Affords Conveniences.—One of the reasons why people sometimes prefer to live in a city is that they like the conveniences which the city affords them.

The small community, however, may have some of these conveniences, if it desires them. Paved streets, city railways, city water systems, electric lights, and delivery of mail are among the many conveniences that may be furnished by a community. These conveniences are financed through taxation. To adjust local taxes so that for a bearable cost the conveniences furnished will be as great and as satisfying as possible is the problem of the civic body of the community. What is the tax levy in your community for these conveniences?

The Community Affords Facilities for Recreation.—No good community will neglect recreation, which is closely connected with law-abiding qualities of its citizens. A municipal swimming pool, expensive though it may be, is far less costly than new quarters for a reform school. Some communities provide gymnasiums, parks, swimming pools, and play grounds for the recreation of their people. City bands that give regular concerts, community fairs, Little Theater movements, and pageants are some of the ways good entertainments are made possible.

A good community is opposed to harmful amusements that may foster low morals. Its citizens not only fight such places but establish good means of entertainment to take their place. As people play together, feuds and quarrels are forgotten, and a spirit of comradeship develops. Community recreation may well be fostered.

The Community Affords Opportunities for Development.—A good community provides its citizens with an opportunity for self-development. Good schools, both for the youth and the adult, are maintained; good music, lectures, books, and pictures are made possible under community auspices. Often clubs and organizations accept the

responsibility for supplying such advantages and work to afford these opportunities to the people in their community.

Exercises.—A. Make a list of the provisions of your community for the well-being and happiness of its citizens. What other provisions do you think should be made by your community?

B. Estimate the amount your community expends for free recreation: by tax expenditures; by service clubs.

C. What are the building regulations in your community? Is there a town plan? a zoning code? a housing law? How effective is each of these?

D. Last summer a traveling carnival started to show in the town of X. After the first day's showing, the city council made them leave. Why did the council take such action?

PROBLEM 3.—WHY DOES THE COMMUNITY REQUIRE ALL OF ITS CHILDREN TO GO TO SCHOOL?

The Community Progresses Through the Quality of Its Citizens.—If the citizens are idle and lazy, little progress can be made. From economics we learn that an individual must produce as much as he consumes, and to be economically safe he must produce even more. Our citizens then must be trained to be industrious and productive so that our society will be economically sound.

An uneducated, unintelligent class of people make an undesirable community. Although education cannot supply intelligence, it can teach people to read and write, can inform them to some extent, and can train each person to the best of his ability so that he can do well the thing for which he is capable.

No community achieves much without the coöperation of its members. Man by nature is individualistic, and coöperation must be learned. Family life lays the basis for coöperative living, but further training of this quality is necessary, and the community must furnish a place of training.

The School Furnishes a Training for These Qualities.—Industrious, intelligent and coöperative citizens are the desire of all good communities and schools. The school emphasizes industry in its training and seeks to establish such habits in its pupils. The school believes in the importance of coöperation in life and offers opportunities for training in this line. Class projects and problems furnish excellent means for coöperation.

FIG. 54. Overbrook Senior High School an excellent example of modern high-school architecture.

Through the School the Community Safeguards Its Youth.—Many young people become anxious to earn money long before they really are prepared for any definite work. They leave school and drift into the first thing offered. Here they stay and most of such jobs offer no advancement; they are what we call blind-alley jobs. The school aims to protect against such results and does all in its power to encourage boys and girls to stay longer in training and to prepare

for a definite life work. The school also offers, for those who must leave early, the opportunity of further training in the part-time school. Twelve or fifteen dollars a week may be good wages for a young person, but to remain at that wage all your life is quite a different matter.

Studies have been made to show the advantages in dollars and cents of further training over leaving school to work. Considering the full life-time period of earning, the average high school graduate earns one and three-fourths as much as the average youth who leaves school to work at the age of fourteen, the average graduate of the college or technical school earns three and one-third times as much as the youth who leaves school at fourteen, and slightly less than two times as much as the high-school graduate. While these differences may be owing in part to differing abilities, they doubtless indicate, to some extent, the value of extended education.

The Community Finds in Education a Protection Against a Pauper Class.—Every individual must be trained to earn a living. He must be self-supporting after his period of education is over if he is to succeed. All boys after a certain age are direct wage earners and all girls are either direct or indirect wage earners. The ability to earn furnishes the greatest protection society has against the creation of a pauper class.

There are many different types of vocations. The number is sometimes given as twenty thousand. A person should have no difficulty in choosing an occupation which is both pleasant and remunerative, and then preparing for it. If you are ever inclined to complain because you are required to go to school, just remember that society is thinking of your future welfare and is furnishing you a means of happiness and success in life.

Exercises.—A. What is the cost per child to your community of schooling in elementary grades? In the high school?

B. Write a theme on the opportunities offered in the part-time and evening schools in your state.

C. Mr. Smith continually kept his thirteen year old son John out of school to help with the farm work. The truancy officer notified Mr. Smith that John must be in school. Mr. Smith paid no attention to this notice. Very soon he was fined and forced to send John to school. Why was he not allowed to do as he chose with his son?

PROBLEM 4.—HOW DOES THE CHURCH CONTRIBUTE TO COMMUNITY LIFE?

The importance of the church in a community hardly needs to be mentioned, so generally is it recognized. The influence upon the community and its members cannot be measured. Few of us would care to live where there were no churches. The community members need religious training, and the church is the institution best prepared to give it. People need the inspiration, encouragement, and help which the church gives to keep them well balanced and happy.

The Church Contributes to the Social Life of the Community.—The church is a means of furnishing wholesome recreation and entertainment for the members of the community. One of the best methods of doing away with questionable amusements is to supply something good, and the church has used this plan. Through its many organizations which provide much opportunity for social life, it is making a real contribution to the community.

The Church Contributes to the Ideals of the Community.—Have you ever thought that the ideals which the people in your community hold were originated long ago? For generation after generation, these ideals have been taught through the church. Communities have had in their churches

a means of receiving the best ideals of other generations. This is a wonderful heritage. However, this is not the only thing the church secures for us.

Through the church should come the interpretation of these ideals in terms of modern life. With our rapidly

FIG. 55. Center Church, New Haven, Conn. Many churches have served as community centers ever since Colonial times.

changing world many forms and customs of other years lose their significance. It is important that the church sift the non-essentials from the essentials and conserve for the community the things of deep religious import. Since the religious thought and the ideals held by the people today

affect not only this present group but through their children the generations to come, it is most important that our religious leadership be wise.

The church need not wait until some later year to have its leadership felt. Frequently some situation arises in a community in which the good citizens desire action against flagrant wrong doing. The church, through its leadership, may enable them to act as a group, with the strength of a national group back of them. Organized effort under devoted leadership accomplishes much in raising community ideals.

The Church Is a Great Formative Factor in the Lives of Individuals.—Its influence cannot be measured. Children who are trained in religious thought in church do not as a rule depart greatly from these teachings as adults. The personal contacts of individuals in the church have been factors in determining the lives of these individuals.

Many families are willing to enjoy the benefits which they receive from the church but have never thought of their obligation to pay anything in time or money in return. The sense of fair play should make people willing to participate in the activity and expense of an institution that is enriching their lives.

Exercises.—A. Several weeks ago a new family moved to town. The father said that they came to this town to live because it was known as a town of active churches. Why did this family wish to live in such a town?

B. Which of these statements are correct? Which are incorrect?—

1. A good citizen obeys the laws and coöperates in community undertakings.

2. The good citizen seeks office as a means of serving his community.

3. The church, school, and home should each work separately for the good of the community.

4. A community is not justified in levying a tax for beautification of its parks or other similar purposes.

5. The recreation of the people of the community is no concern of the community.

6. When people play together, they soon become quarrelsome and individualistic.

7. The development of the citizens to the best of their ability should be the desire of every community.

8. The community safeguards its youth by means of its schools.

9. The boys of the community must be trained to earn a living, but for the girls this is not necessary.

10. The church gives inspiration, encouragement, and help to the members of the community.

11. The time to establish religious ideals is in adult life.

12. The community has an obligation in maintaining the church for its people.

13. A good citizen has a keener interest in his town than he has in his state.

Additional Problems and Exercises.—1. Why do we desire churches in our communities?

2. What provision has your community made to protect you and your home?

3. In what ways is the cost of the school justified?

4. What are the advantages and disadvantages of a municipal swimming pool?

5. List the civic organizations in your community. Outline their program of work.

6. List the responsibilities of the home toward community activities.

7. Outline a plan for community "clean-up week."

8. Explain what is meant by "individuals should have respect for public and private property."

Books for Class Reference:

Edmonson, J. B. and Dondineau, A. "Citizenship Through Problems." Macmillan Co.
Lyon, L. S. "Making a Living." Macmillan Co.
Lyon, L. S. and Butler, A. M. "Vocational Readings." Macmillan Co.
Trafton, G. H. "Science of Home and Community." Macmillan Co.

Suggested Bulletins and Leaflets for Teacher and Student:

Dean, J. M. "Rural Community Organization." Miss. Agr. Ext. Cir. 42:1–8, 1925, Agr. and Mech. College, Miss.

Hyde, B. C. "Women's Work in Fair Exhibits." Colo. Agr. Ext. Bul. 238 A:1–19, 1926, Colo. Agr. Col., Fort Collins, Colo.

Hummel, B. L. "Community Organization in Missouri." Mo. Agr. Ext. Cir. 183:1–69, 1926, Mo. Col. Agr., Columbia, Mo.

Kolb, H. and Wildeden, A. F. "Rural Community Organizations." Wis. Agr. Exp. Bul. 384:1–92, 1926, Univ. Wis., Madison, Wis.

"Once in Four Years. How the Presidents are Elected. How the President's Powers are Defined. How Issues Help Shape Campaigns. How the Political Parties Function. How You Can Help Your Party. How You Can Help Get Out the Vote." Women's Home Companion, N. Y. C.

"Personal Property Inventory." Woman's Home Companion, N. Y. C.

"Simple Facts About Local Politics." Woman's Home Companion, N. Y. C.

Starring, G. A. "Rural Leaders Handbook." S. D. Agr. Ext. Cir. 233:1–14, 1925, Brookings, S. D.

"What Every Club Woman Ought to Know—A Guide to Parliamentary Law." Women's Home Companion, N. Y. C.

"What Every Woman Should Know About Life Insurance." Woman's Home Companion, N. Y. C.

Whitecomb, E. S. "Contribution of Home Economics to Citizenship Training." (B. 1925, No. 3, 43 pp.) U. S. Bur. Edu., Washington, D. C.

Home Projects.—1. Assume some important home responsibility which will give increased happiness for the entire family group.

2. Keep the household accounts of your home for one month.

3. Keep your own personal accounts for one semester.

4. Budget your allowance for four or five months, and make your expenditures follow the plan you have outlined in advance. Report your results.

5. Improve the efficiency of your home kitchen without purchasing additional equipment.

6. Refurnish your own room with an expenditure of not more than ten dollars.

7. Make a study of the lighting in your home and make such changes and additions as will improve the present lighting.

8. Rearrange or remodel the attic or basement into a more attractive and useful room. One family has made a neighborhood boys' club room out of its basement.

9. Make a cleaning closet for cleaning equipment, first studying the equipment to be stored.

10. Select and make linens for your home; or make out a better system of storage for your linens.

11. Make a study of the efficiency of certain pieces of equipment in your home.

12. Assume the responsibility for the care of some room or rooms in your home for a given period of time.

13. Assume the responsibility for the use and care of certain pieces of equipment for a given period of time.

14. Care for your home poultry for a given time; keep the cost accounts.

15. Care for the closets in your home for a given time.

16. Clean the silverware at home for a given time.

17. Assume responsibility for portions of laundry for a certain time.

18. Do the family laundry for one month.

19. Remove the stains from stained garments and house furnishings.

20. Plan and adjust the height of the working surfaces in your home to the correct height for the workers.

21. Make a season schedule for your home and assume responsibility for some of these activities.

22. Plan and carry out the beautifying of your home and yard.

23. Plan and carry out a weekly family evening in your home for a month or six weeks.

24. Assist in some worthy community enterprise.

Additional Books for the Teacher:

Abel, M. H. "Successful Family Life on the Moderate Income." J. B. Lippincott Co.
Andrews, B. R. "Economics of the Household." Macmillan Co.
Balderston, L. R. "Housewifery." J. B. Lippincott Co.
Gilbreth, L. "The Homemaker and Her Job." D. Appleton & Co.
Gilbreth, Lillian. "Living With One's Family." W. W. Norton.
Gray, G. "House and Home." J. B. Lippincott Co.
Groves, E. R. and G. H. "Parents and Children." J. B. Lippincott Co.
Groves, E. R. "Social Problems of the Family." J. B. Lippincott Co.
Groves, E. R. "The Drifting Home." Houghton Mifflin Co.
Groves, E. R. "Wholesome Marriage." Houghton Mifflin Co.
Spencer, A. G. "The Family and Its Members." J. B. Lippincott Co.
Taber, C. W. "The Business of the Household." J. B. Lippincott Co.

SECTION II—HEALTH AND HOME CARE OF THE SICK

SECTION II. HEALTH AND HOME CARE OF THE SICK

UNIT ONE

HOW HOME AND COMMUNITY SANITATION IS RELATED TO HEALTH

Introductory Studies.—1. Name four conditions which you regard as indications of good health.

2. Make a list of the diseases which you have had and estimate the amount of time lost as a result of each illness.

3. What daily health rules do you observe?

4. List four sanitary measures adopted by your community which contribute to the health of individuals.

Presentation of the Unit.—If you were to list the requisites for happiness what would you put first? Your thoughts swing to a fine home, a large car, travel, money, college, fame, only to come to a standstill. None of these things belongs first. In order that any one of these items give you full satisfaction you must have the fitness for living which we term *health.*

Perhaps you have thought of a healthy person as one freed from sickness. That idea was prevalent in former days and the phrase "perfectly healthy but just nervous" was often heard. Today our concept of health has broadened so that we think of it as a characteristic of the *whole person.* As we now understand it, a *nervous* person or a constitutionally unhappy person is as far from possessing health as a patient ill with smallpox.

How shall we define health? A satisfying definition is, "Health is that condition of the body that makes possible

the highest enjoyment of life, the greatest constructive work, and that shows itself in the best service to the world."*

Such a definition gives to health a deep significance. Through health, full enjoyment of life becomes possible, work of the highest order is insured, and the best service of the individual is secured for the world. If your personal joys, professional achievement, and social effectiveness are dependent on health, it becomes the keystone of your life, taking a vital part day by day in the structure that your service builds, and increasing in importance as that structure grows.

In other words, your health problem becomes much more than a problem of merely being *physically* fit. That is important of course, but it is equally important that your mental reactions are true, and that you have a wholesome, helpful attitude towards the people with whom you come in contact. A strong body ruled by a sick or twisted mind lacks health. A strong body ruled by a vigorous mind with no spirit of service lacks health. To be constantly in health, then, will mean that the physical body must be kept at its best so that through it the growing mind may serve humanity.

Since health is so important to us it is desirable that we understand the forces that affect the individual's health. Briefly stated, the influences that affect the individual's health are (1) his inheritance, (2) his environment, and (3) his reaction to his environment.

Inheritance is a term which we often use. A girl may have inherited blue eyes, red hair, or a snub nose from one of her parents. This characteristic has been passed down to her through the germ plasm from which she has developed. More important to the child than physical features is his

*Williams, J. F., *Personal Hygiene Applied*, Saunders, 1923.

health inheritance. By this is meant his capacity to grow, to possess bodily vigor, and to resist disease.

A vigorous, healthy baby with normal strength and resistance to disease has an excellent start on the highway

FIG. 56.—"A Health Champion" whose buoyancy is maintained by outdoor exercise. Courtesy of Division of Extension, Kansas State Agricultural College.

to health. There is no way this start can be secured except through healthy parents. After a good start through a healthy inheritance, one's progress may be helped or hindered

by his environment, and by his own reactions to this environment as he develops.

Have you ever known a person possessed of a fine physique, and sheltered in a good home, to have illness, a lack of enjoyment in life, and a low capacity for work because of the response he made to the situation in which he was placed? If candy or sweets were available, they must be eaten; if there were a book half read, it must be finished, even though bed time were long past. He would break any health rule just to show "how strong" he was. Many of us have something of this nature in us. It constitutes a health hazard that is serious and one that can be overcome only by the individual.

The part that the environment plays in health is very great. If given inadequate food, poor housing, lack of rest and sunshine, and no recreation, even a sturdy baby with a good health inheritance may become a puny, sick child. His environment has not made it possible for him to develop to the full promise of his physical inheritance.

We can place on parents the obligation for giving their children a good health inheritance; we can place on the individual and his parents the responsibility for his reaction to his environment, but neither the parents nor the child can be held wholly responsible for the environment. This is a responsibility shared by the community and the state.

Of course, the environment may be, in part, beyond control. The weather may be too hot or too cold, the elevation may be too high, the air may be too dry or too humid. Such conditions as these may affect health, but they cannot be regulated. There are, however, other factors of the environment which may be controlled to man's advantage. Among these factors are the food supply, the water supply, the housing conditions, and the disposal of waste. Where

the population is dense, there is great danger of an infected food supply or water supply spreading an epidemic. The disposal of sewage and waste also becomes an increasing problem as people crowd to limited areas. Overcrowded houses with their accompanying poor ventilation and limited play room are commonly, though not exclusively, found in city tenements.

The science of sanitation has developed as people have come to realize that the individual's health can be safeguarded only as the community health is safeguarded, and that joint endeavor is necessary. Sanitation consists of devising and applying measures for promoting and preserving public health in general.

PROBLEM 1.—HOW SHOULD OUR FOOD SUPPLY BE PROTECTED?

Have you ever thought of the steps taken in your community to protect the food supply? The next time you are in a grocery store look about you and list the various means by which food is safeguarded. Your attention probably will fall first on the shelves of canned goods. Perhaps next you will see row on row of packages of cookies and crackers. In the rear of the store there may be a large ice-box in which are kept milk, meat, eggs, fish, and other foods. Much of the food is sealed in tin or paper containers, or kept on ice. Why is all this precaution taken? We have found that a safe food supply is absolutely essential to the health of people. Communities now make an effort to insure such a food supply to their citizens. Particularly important is the protection afforded the milk supply at its place of production and throughout its entire handling until it is consumed.

Certain Conditions Are Favorable to Food Spoilage.—What causes food spoilage? Have you ever picked up an

orange and found a spot of green mould on its skin? Have you ever found milk sour or fruit juice fermented? What was the cause in each case? In each instance the growth of living organisms changed the food. The organism used something from the food and altered its composition. These changes in composition are shown by differences in flavor, structure, and value, and are called decay. The yearly loss from the decay of fresh fruits alone runs into millions of

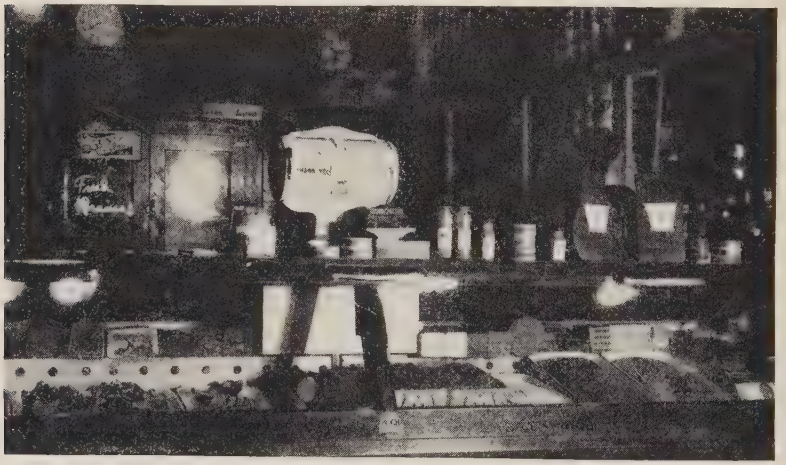

Fig. 57. A modern grocery store takes many measures to safeguard your food.

dollars. More important than the money loss is the danger people face from using foods that are not evidently decayed, but that carry dangerous bacteria or poisons produced in them by the growth of micro-organisms.

To avoid loss and secure safe food it is important that we know the conditions that favor the growth of the bacteria, yeasts, and molds, which cause food spoilage. Of these conditions, perhaps the one most readily observed is warm temperature. Merchants and dairy men as well as house-

wives are familiar with the increase in spoilage that occurs when the thermometer rises. This is the result of the rapid growth of micro-organisms at the higher temperature. Great advances have been made in the last three decades in our ability to store and market foods at a low temperature. Through the use of mechanical refrigeration it is possible to keep the temperature of large store rooms below freezing or at any desired point. Safe storage of foods for long periods of time becomes possible. By refrigerator cars, perishable food stuffs are shipped all over the country, so that sound food of almost every kind can be secured, regardless of the season, in our larger cities.

The second factor that favors food spoilage is the high per cent of water present in most of our foods. Milk, for instance, is an excellent food for bacteria as well as for man. What per cent of water does it have? Peaches, tomatoes, and strawberries spoil easily. What is the per cent of water in each? Moisture favors food spoilage, and its removal by drying makes keeping food possible. What foods can you name that are dried?

The third factor that favors food spoilage is easy access of air. Bacteria, yeast, and molds are constantly present, and foods may become badly contaminated by organisms carried in the currents of air. Provision is made in some stores so that food can be seen and yet not be accessible to flies nor contaminated by dust from a direct air current. Can you describe such an exhibit case? There are other factors that favor spoilage besides temperature, moisture, and easy access of air loaded with micro-organisms, but these are the most easily controlled.

Foods Should Be Protected in Production and Manufacture.—Have you ever visited a packing house? Do you recall that on the carcasses that were sent in rapid procession

to the cold storage rooms there appeared a stamp showing that the meat had been inspected by the United States Government? The Government's inspection of meat is an excellent example of protection in the production and manu-

Fig. 58. Only by careful inspection can a safe meat supply be secured. Courtesy U. S. D. A. Bureau of Animal Industry.

facture of food. The meat is inspected to insure its soundness and freedom from disease. Then it is safeguarded by law from the addition of poisonous preservatives in the later steps of preparation. Certain standards of cleanliness are maintained in the packing house. How nearly do the same conditions hold in a bakery? a candy kitchen? In most

communities there are regulations concerning the production of milk, even if rules governing other foods are most inadequate. Why is this true?

The wholesomeness of milk depends largely on its relative freedom from bacteria and their products. It is practically impossible to obtain bacteria-free milk. The presence of organisms everywhere prevents this, but by far the greater

FIG. 59. This tuberculin tested herd is a safe source of raw milk for the baby's breakfast

number of bacteria found in milk come from dirt and may be kept out of the milk by clean methods of production and handling.

It is important that the cows from which the milk comes be free from disease. What disease are cows tested for? Have you ever heard of the tuberculin test or known of the tuberculin test being given to cows?

The milk from a tubercular cow may be the means of

EQUIPMENT	SCORE		METHODS	SCORE	
	Perfect	Allowed		Perfect	Allowed
COWS			**COWS**		
Health	6		Clean	8	
Apparently in good health 1			(Free from visible dirt, 6.)		
If tested with tuberculin within a year and no tuberculosis is found, or if tested within six months and all reacting animals removed 5			**STABLES**		
(If tested within a year and reacting animals are found and removed, 3.)			Cleanliness of stables	6	
Food (clean and wholesome)	1		Floor 2		
Water (clean and fresh)	1		Walls 1		
STABLES			Ceilings and ledges 1		
Location of stable	2		Mangers and partitions 1		
Well drained 1			Windows 1		
Free from contaminating surroundings 1			Stable air at milking time	5	
Construction of stable	4		Freedom from dust 3		
Tight, sound floor, and proper gutter 2			Freedom from odors 2		
Smooth, tight walls and ceiling 1			Cleanliness of bedding	1	
Proper stall, tie, and manger 1			Barnyard	2	
Provision for light: Four sq. ft. of glass per cow	4		Clean 1		
(Three sq. ft., 3; 2 sq. ft., 2; 1 sq. ft., 1. Deduct for uneven distribution.)			Well drained 1		
Bedding	1		Removal of manure daily to 50 feet from stable	2	
Ventilation	7		**MILK ROOM OR MILK HOUSE**		
Provision for fresh air, controllable flue system 3			Cleanliness of milk room	3	
(Windows hinged at bottom, 1.5; sliding windows, 1; other openings, 0.5.)			**UTENSILS AND MILKING**		
Cubic feet of space per cow, 500 ft 3			Care and cleanliness of utensils	8	
(Less than 500 ft., 2; less than 400 ft., 1; less than 300 ft., 0.)			Thoroughly washed 2		
Provision for controlling temperature 1			Sterilized in steam for 15 minutes 3		
UTENSILS			(Placed over steam jet, or scalded with boiling water, 2.)		
Construction and condition of utensils	1		Protected from contamination 3		
Water for cleaning	1		Cleanliness of milking	9	
(Clean, convenient, and abundant.)			Clean, dry hands 3		
Small-top milking pail	5		Udders washed and wiped 6		
Milk cooler	1		(Udders cleaned with moist cloth, 4; cleaned with dry cloth or brush at least 15 minutes before milking, 1.)		
Clean milking suits	1		**HANDLING THE MILK**		
MILK ROOM OR MILK HOUSE			Cleanliness of attendants in milk room	2	
Location: Free from contaminating surroundings	1		Milk removed immediately from stable without pouring from pail	2	
Construction of milk room	2		Cooled immediately after milking each cow	2	
Floor, walls, and ceilings 1			Cooled below 50° F	5	
Light, ventilation, screens 1			(51° to 55°, 4; 56° to 60°, 2.)		
Separate rooms for washing utensils and handling milk	1		Stored below 50° F	3	
Facilities for steam	1		(51° to 55°, 2; 56° to 60°, 1.)		
(Hot water, 0.5.)			Transportation below 50° F	2	
			(51° to 55°, 1.5; 56° to 60°, 1.)		
			(If delivered twice a day, allow perfect score for storage and transportation.)		
Total	40		Total	60	

Equipment _____ + Methods _____ = _____ **Final Score**

NOTE 1.—If any exceptionally filthy condition is found, particularly dirty utensils, the total score may be further limited.

NOTE 2.—If the water is exposed to dangerous contamination, or there is evidence of the presence of a dangerous disease in animals or attendants, the score shall be 0.

8—3278

FIG. 60. Score card. Sanitary inspection of dairy farms.
Courtesy U. S. D. A. Bureau of Dairy Industry.

spreading tuberculosis among many children. For this reason, a vigorous campaign is being made to eliminate all tubercular cows from dairy herds.

However, even the milk from a tested herd may not be safe unless produced under sanitary conditions. Straw, bits of manure, dust, and dirty hands alike may lead to its contamination. How might rules for personal cleanliness, and the use of small-mouthed milking pails or the use of a milking machine secure cleaner milk? The preceding score card is used in judging conditions in dairies that make for clean milk.

The few bacteria that are present in even the most carefully produced milk will multiply very rapidly unless the milk is kept at a low temperature. For this reason, the immediate chilling of milk plays an important part in its safe production.

Since it is not always possible to hold milk at low temperatures throughout the production and transportation of it, pasteurization has been largely used to secure a safe supply.

What is meant by pasteurization? Of the several methods used, that of heating the milk to 144° F. for thirty minutes is considered the best. The milk may be pasteurized in the bottles or bottled later. Even pasteurized milk should be kept cool until used.

Adequate Protection Should Be Given Food in Its Transportation.—However carefully any food has been handled in its manufacture and production it can be spoiled by careless transportation. Milk produced under sanitary conditions, showing a low bacterial count, may become a source of danger if carried for some distance in an open truck without ice. What dangers attend the shipping of oysters and fish? The rapid express service for refrigerator cars has

lessened the spoilage in handling fresh fruits, vegetables, milk, and meats. What protection is given cereal foods?

Food Should Be Safeguarded in the Markets and Stores.—Perhaps we are more familiar with the manner in which food is safeguarded in our markets than we are with measures taken in either production or transportation.

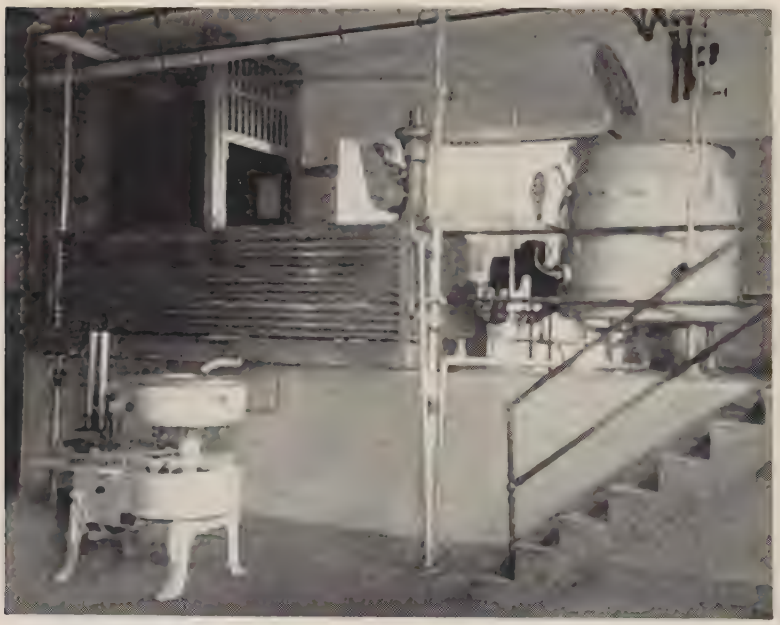

FIG. 61. Pasteurization of milk insures its safety.

In many states bread must be wrapped, so that disease will not be spread by careless handling; milk may be sold only in the original containers used by the producer; and definite rules are given concerning the sale of ground meats. Some states and many cities have laws requiring a physical examination of persons handling food. Does the Depart-

ment of Public Health in your city score groceries and bakeries? What would be a good basis for scoring the adequacy of food protection in your local market?

Precautions Should Be Taken in the Home.—The housewife has a responsibility as a citizen for safeguarding the production, manufacture, and transportation of food to the markets. She has also a personal responsibility for the condition of food served in her home. What provisions are made in your home for keeping your food in good condition? Probably the first means used is the ice-box. How does the ice-box keep food from spoiling? What is its usual temperature? Check yours with a thermometer in different parts of the compartments.

Sometimes food is delivered in a questionable condition. There may be no evidence of spoilage, and yet the housewife may know that it has been so carelessly handled that contamination has occurred, or she may fear that such is the case. What can be done to make such food safe? Have you ever known mothers to boil milk before giving it to children? Certain prepared foods, such as beans, macaroni and cheese, and meat dishes purchased at delicatessen shops, should be heated to the boiling temperature and held there for five minutes before using. Foods prepared in the home and kept several days may require heating in this manner to render them safe. In preparing milk for artificial feeding of infants one of the regular steps is sterilizing the bottles and pasteurizing the milk.

Not infrequently housewives are confronted with the care of certain raw vegetables and fruits which are too bulky to be kept in the ice-box. What examples of these can you give? What happens to carrots or turnips when left exposed to the air in your home kitchen? To keep such food in good condition, a sand box may be used. The roots and tubers

are literally buried in a box of sand; in this way vegetables are protected from exposure to the air, and drying out is prevented.

Apples and pears as well as citrous fruits are sometimes wrapped in paper. The use of the paper prevents contact of one piece of fruit with another, and also provides protection from air currents.

Exercises.—A. Plan a score card to judge a market or grocery store; notice quietly whether some store in your community meets your standards.

B. By what standards may the milk supply be judged?

C. Clean the laboratory refrigerator and make rules for cleaning the household refrigerator.

D. The Y family became ill with typhoid fever. The doctors traced the source to their milk supply. In what ways might it have been possible to have received the infection through this food? How could this have been prevented?

PROBLEM 2.—HOW MAY PURE WATER BE PROVIDED?

You have learned that the body needs water to maintain its tissues. How many glasses do you drink each day? How does this compare with the amount recommended? What other needs have you for water? Quickly your mind runs down a long list: bathing, disposal of sewage, household cleaning, washing of food and dishes—there are many items on your list. How many gallons of water will it require to meet these needs daily? Why is it essential that the water for these needs be pure? How may pure water be secured?

Safeguarding Sources Is a Means of Providing Pure Water.—What is your source of water? Perhaps you may say the water comes from the river or a well. If conditions are safe at the point where the water is taken from the river

or pumped from the well, will the supply be safe? Not necessarily; the river and the well both represent only steps in the water's travel. The water which falls as rain drains from the countryside into creeks, which in turn feed the river, or it seeps into underground channels that feed the well. The purity of the water depends upon what has happened to it from the time it falls as rain until it comes from your faucet. It may become badly contaminated in its travel. The pollution which is most dangerous is that of disease-producing bacteria. Have you ever read in the paper a statement of the bacterial content of the water in your community? Perhaps at some time a warning has been issued that the water is not safe.

Many cities attempt to secure safe water by inspecting the area whose rainfall furnishes them with their water supply. Perhaps somewhere you have seen such a sign as, "Sanitary Area, No Campers." The city hopes through this sign to protect its water shed. If water is taken from a river what difficulties may arise? Perhaps some city located farther up the river drains its sewage into the stream. Because of this pollution it is not always possible for cities to secure a safe source of water. Then further means must be used.

Filtration Is a Means.—What is meant by filtration? If you were to go to a plant in which this method is used you would find that provision is made for the water to run through beds of sand and gravel. The contact of the water with these small particles leads to the depositing of the organic material which has made it unsafe. You can easily see how bits of leaves or moss may be strained from the water. It is interesting to note that even the minute forms of vegetable life, such as bacteria, are also removed.

Sometimes filtration is not practical; if the pollution is heavy it is not a sufficient measure to secure pure water.

Treating with Chemicals Is a Means.—Have you ever drunk water that tasted of chemicals? Did you wonder why it had this peculiar taste? It is probable that either chlorine gas or bleaching powder had been added to the water to kill the bacteria known to be present. In case of flood, broken sewage mains, or other factors leading to

FIG. 62. This aqueduct insured a safe and adequate supply for Roman citizens in the city of Nimes more than a thousand years before Columbus discovered America.

bad pollution of the water, such chemicals are resorted to for safety. In some cities chemicals are used with filtration as a part of the regular treatment.

If you were to travel in certain countries abroad where the cities have not yet accepted the responsibility for supplying safe water, you would find hydrants marked "non potable." What does this mean? What measures would you then have to take to secure safe water?

Perhaps you might purchase bottled water; but even this

may not be safe. It might be necessary to add chemicals to your water. In India, permanganate of potash is much used. Enough of the chemical is added to give a light pink tinge to the water, which is then allowed to stand some time before using. During the World War the hypochlorite treatment was used by our soldiers to make their water safe. However, these methods are not advocated for general home use. If a person is to be exposed to possibly contaminated drinking waters, doctors now inoculate the soldier or traveler with "typhoid-para-typhoid" vaccine which creates an immunity to these water-borne diseases.

Boiling Is a Means.—Perhaps boiling is more commonly used for water purification in the home than any other method. It is recommended that the water be boiled for five minutes, and that it be kept covered afterwards to exclude further contamination.

Certain Tests Indicate Pure Water.—How may you know that your water is pure? In most communities we depend upon the examinations made by our State or City Board to determine the safety of our water. This examination usually includes a chemical analysis of the water and a bacteriological examination. In some communities this test is made regularly; in others it is made only upon request. How often are these examinations made in your community? If the chemical analysis of water shows the presence of organic matter, pollution from either animal or vegetable origin is suspected. A high per cent of salts indicates polluting materials such as sewage and trade wastes.

Practically all water contains bacteria. The significance of the examination of the water rests upon the kind and number of bacteria found. The presence of the colon bacillus which is found in the large intestine indicates that the water is contaminated with wastes from the human

body. Such contamination is alarming since it suggests the possible presence of typhoid bacilli.

Exercises.—A. Write a description of the method which your community uses to supply you with pure water.

For the class:

B. Using suitable precaution, send a sample of water from a cistern, a well, or a swimming pool to the state bacteriologist for report.

C. Score the drinking fountains in your community.

D. Last summer in City F——— the water commissioner announced that the city water was unsafe. What means of making the water safe could be used?

E. The well on the Brown farm has been declared unsafe because of the presence of colon bacilli. What sort of contamination does this indicate? What measures should the Brown family take to secure safe drinking water? Can the water be used safely to wash the milk bottles and fresh vegetables?

PROBLEM 3.—HOW MAY SAFE DISPOSAL OF SEWAGE BE MADE?

Poor Sewage Disposal Is a Menace to Health.—Since the most serious contamination of water is that which comes from human wastes, the disposal of these wastes becomes most important if health is to be safeguarded. In early days when the country was sparsely settled the sewage disposal problem was not serious. Why?

As the population increased the disposing of sewage became more difficult and complex. For example, since the sewage of New York City amounts to more than a billion gallons daily, the problem of disposing of such enormous amounts without danger or offense becomes tremendous. All cities have similar problems varying only in quantity. How does the location of New York City seem to simplify its problem of disposal? Is disposal into a river or harbor satisfactory? What is New York's problem

of river pollution? It is already necessary for New York to plan ahead for sewage-disposal works.

Adequate Disposal Is Possible.—Even though the disposal of sewage is a difficult undertaking, scientists have developed adequate means. In general, this means treatment of the material in some manner to avoid the pollution of streams.

Disposal May Be Through Dilution or by Treatment.—What provision is made for sewage disposal in your community? In many of the smaller towns human wastes are washed through the sewers by water directly into a near-by stream. In the water the organic material is dissolved and the bacteria may be killed by such factors or agents as sunlight and oxygen. The stream is able gradually to purify itself if the sewage load is not too heavy, and if the nearest town depending upon the river for water supply is far enough away.

Should the amount of sewage waste to be carried be in excess of the self-purifying power of the stream, treatment is necessary. In sewage treatment, the solid matter is separated from the liquid, and given special treatment which removes its offensiveness and danger. The liquid is treated to destroy or remove the bacteria present.

In many of the large cities the treatment proceeds in the following steps:

(1) The sewage is collected into large cement or iron tanks where the larger particles of material are removed either by allowing them to settle out or by screening them out. The sludge so secured may be treated with chemicals and used as fertilizer or disposed of in some other manner.

(2) The liquid from which this material has been removed may be passed on to other tanks for further

settling and for decomposition of the solid substances it still contains.

(3) The liquid from the tanks may be emptied directly into a lake or river. If further treatment is necessary to make the sewage liquid safe, it may be given by having the fluid flow over a bed of sand or small stones several feet deep, thus bringing it into contact with the air, or it may be

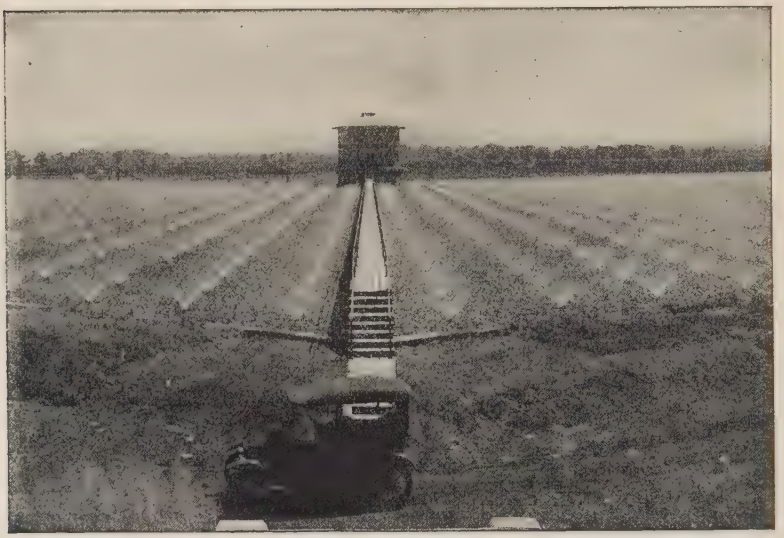

Fig. 63. Sprinkling filter.

sprayed from pipes to accomplish the same purpose. It is sometimes treated with chlorine. What system is used by the larger cities of your state? Why was each method chosen?

Farm and Village Sewage Disposal Presents a Difficult Problem.—The provisions made for sewage disposal in villages and on farms are often inadequate because the responsibility is dispersed among many people; the problem

has not had the attention of great engineers, and the people have not understood the dangers involved.

In rural homes where water is not available to carry off the waste, a satisfactory method is secured through the protected privy. This is an outside toilet planned so that the body wastes are received in a tight vault, protected from

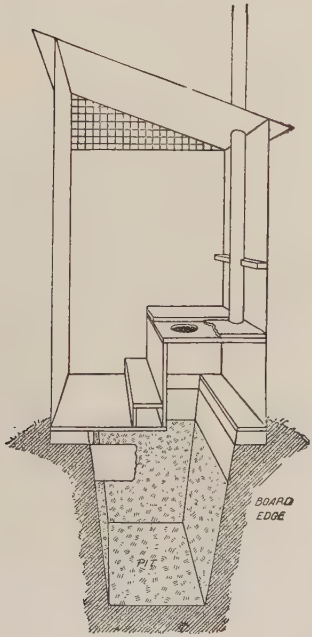

Fig. 64. A good privy.

Fig. 65. A poor privy.

flies, rats, and farm animals, but with ample provision for fly-screened ventilation and cleaning.

A study of the soil should be made before the privy is located. It should be as far as possible from any well, your own or neighbor's. Even a distance of one hundred feet may not be safe in some types of soils. It should also

be far enough from the house to protect the home from foul odors; indeed, odor should be reduced to a minimum by using covering material as earth, lime, etc.

FIG. 66. A two-chamber septic tank in the process of construction. For use on a farmstead. Courtesy *Hygeia*.

In homes where water is available a septic tank should be used to dispose of the sewage. A septic tank is a large concrete tank built in the ground. Partitions of concrete have been made in it. This affords the solid matter of the sewage an opportunity to settle before the liquid in which it has been suspended passes from the first section into the second. Further settling occurs between the second

and the third or discharge tank. The passage of the sewage from one section of the tank to another is secured by having the partition walls of different levels. Through use of the septic tank a complete decomposition of sewage may be secured by bacterial action before it is drawn off through the discharge pipe and allowed to soak away in the soil. Where there is no sewage system, an indoor toilet with water-borne disposal of waste into a septic tank should be sought for every detached house as the safest and most desirable method. Get circulars from your State Board of Health and State Agricultural College on methods of installing septic tanks and building sanitary privies.

A cesspool is a large tank lacking the partitions and is not so satisfactory as the septic tank. Either the tank or the pool should be located some distance from the house. In either case the drainage should be away from the well and the home.

Exercises.—A. Inspect outside toilets and report the conditions which make any of them a health menace.

B. List the important steps to be taken in planning for an outdoor toilet.

C. How is sewage disposal made in your community? Write a criticism of the method used and give suggestions for its improvement.

D. The city of B——— has made a complaint against city C——— because the latter empties its sewage into the river which supplies city B——— with its water supply. What method can city C——— use that will not be a menace to city B———?

E. The village P——— has an epidemic of typhoid fever which the doctors say is due to bad sewage disposal. What can this village do to prevent a repetition of the epidemic?

PROBLEM 4.—HOW DO REFUSE AND GARBAGE MENACE A COMMUNITY?

Have you ever seen the ash piles and rubbish heaps appear back of homes in the spring time, and wondered how

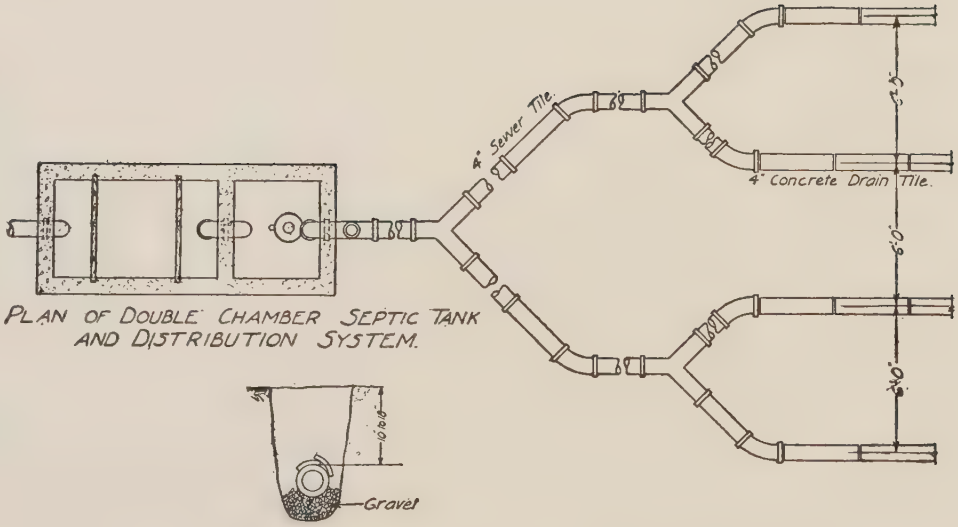

FIG. 67. Construction plan for a double chamber septic tank and its distributing system. Courtesy of *Hygeia*.

large the community refuse heap would be if all the year's débris were piled up? In addition to this discarded material there is the further waste of garbage. We are told by an engineer that in New York City there are 1,600 pounds of refuse and 200 pounds of garbage for each person each year. In villages the amount of refuse may be only a thousand pounds per individual yearly and garbage may drop as low as one hundred pounds. This refuse includes ashes, manure, and such rubbish as discarded tin cans, house furnishings, old papers, and dead animals.

Refuse and Garbage Are Unsightly.—The attractiveness of many homes and communities is sadly marred by poor disposal of its waste. Such unsightliness can be prevented only by adequate individual and community provision for the disposal of the trash.

Refuse Constitutes a Fire Hazard.—Have you ever known a fire to result from careless piling of paper and trash in a basement or an alley? In many cities the fire inspector visits residences to prevent such an accumulation of waste Do you have such inspection in your community? The unnecessary loss from fire runs into millions of dollars annually. Provision to eliminate the fire hazard of combustible trash will help to lower fire losses.

Refuse and Garbage Are Health Hazards.—In some communities, vacant lots become littered with tin cans which catch and hold rain water, thus providing ideal breeding places for mosquitoes. In a malarial infested community such a condition is a real menace to health.

A manure pile is even more serious. Why? Like garbage it affords an excellent feeding and breeding place for flies. No fly campaign can be successfully handled until the manure piles are eliminated or treated, and safe garbage

disposal provided. How may safe garbage disposal be secured?

Adequate Provision Is a Home and Community Responsibility.—In many communities garbage is collected by the city and fed to hogs. In large cities incineration plants are installed. These dispose of the garbage and refuse by burning.

Aside from unpleasant odors and unsightly appearance caused through poor disposal of garbage and refuse, there is a serious health problem involved.

No individual can live in a crowded area and secure adequate waste disposal alone. The community must set up the machinery and finance the activity. Yet no community can secure completely satisfactory waste disposal without the full coöperation of its citizens. The housewife is particularly interested in this problem and should concern herself with it.

Exercises.—A. Outline a plan for clean-up week in your community.

B. Inspect the alleys, reporting the trash, refuse, manure, and garbage piles that constitute a menace. Prepare for your local paper an article on the conditions found, endeavoring to secure coöperation and to avoid offending citizens.

C. Last week the town of Q——— had a serious fire which started from trash in an alley. How could this have been prevented?

D. A certain family throws its garbage and refuse into the alley. Last week some of the neighbors filed a complaint, and the city officers forced the family to change its method of disposing of garbage and waste. Why did the neighbors complain? What satisfactory methods of disposal can be used?

PROBLEM 5.—WHAT IS YOUR RESPONSIBILITY FOR GOOD SANITATION IN YOUR HOME AND COMMUNITY?

It is not possible for a community to have good sanitation unless every home in the community is working

toward this end. One exposed garbage-can may breed enough flies to infect all the homes on the block. One unguarded privy may cause the infection of several wells. Poor practices in the community may result in milk-borne epidemics. A definite relationship exists between home and community sanitation.

Each Member of the Family Shares in the Responsibility.—The responsibility of your family for the sanitation in your home is evident. What is its responsibility for sanitation in your community? What is your responsibility as a member of this family?

Not infrequently you hear some one family criticised by other families of the community because its members "keep the community dirty." Perhaps this family fails to use the provision made by the city for garbage disposal, making the alley a dumping ground for the food refuse from the house. How many homes might the resulting fly nuisance affect? Often such carelessness as this is due to the mother. But have you ever seen a man spit on the sidewalk or in a street car? Have you ever seen a girl throw a banana peel into the street or toss an empty popcorn box down by the side of a public building? Have you ever seen a boy carelessly throw a lighted match in an untidy alley? These people are all failing to carry their responsibilities.

Each Family Must Coöperate.—Only as there is an understanding on the part of all families in the community of the sanitation projects which are being undertaken can success be insured. While family coöperation is essential in all of the efforts in the community, it is especially important in the matters of refuse and garbage disposal. How does your community control these matters?

Exercises.—A. List ten definite responsibilities of the home for good sanitation.

B. List ten definite responsibilities of the community for good sanitation.

C. At the last city election a citizen of a certain town was asked to vote for a law concerned with the sanitation of food. He replied that it was none of his business because he was a hardware dealer. What do you think of his reply? Was he correct?

D. Today I saw a woman throw her garbage and papers into the alley. Is that my concern? Why?

E. Class debate, Resolved that this community should have a municipally supported garbage disposal plant.

Objective Test.—Can you fill in the words that make these statements correct?

1. Conditions which favor the growth of micro-organisms causing food spoilage are ————, ————, and ————.

2. Standards of ———— should be maintained in the production and manufacture of foods.

3. The housewife is ———— for the ———— of the food served in her home.

4. ———— must be sold only in its original bottle.

5. All bread should be ———— so that disease will not be spread by its handling.

6. The pollution of water which is most dangerous is ————.

7. Water can be purified by ————, ————, and ————.

8. It is important that the ———— of water be safeguarded.

9. The proper ———— of sewage is one of the greatest problems of a community.

10. Refuse and garbage not properly cared for are ———— and ————.

11. Provision for adequate garbage and trash disposal is a responsibility of the ———— and ————.

12. One uncoöperating family may cause the ———— to suffer from its poor ———— practices.

13. The community makes its contribution to sanitation through ————, ————, ————, and ————.

14. Satisfactory ———— in the home and community is the basis for family health.

15. The community's water supply ———— frequently.

16. A strong body ruled by a sick mind lacks ————.

17. The influences that affect the individual's health are ————, ————, and ————.

Additional Problems and Exercises.—1. Consult your textbooks in General Science, Physiology, and Hygiene, and write a paper giving the principles of good ventilation and outlining the steps by which it can be secured in the home.

2. How does your community safeguard your milk supply?

3. How is the garbage disposed of in your community?

4. How may a poorly kept refrigerator affect the health of the family?

5. Visit a dairy, using the state score card to rate it.

6. Write a theme on the sanitation of dairies.

7. Visit grocery stores, meat markets, bakeries, candy kitchens, and laundries. Report the sanitary conditions found in each place and the measures used to safeguard health.

8. Make a survey of your community listing the unsatisfactory sanitary conditions which should be remedied.

9. How may poor care of a home affect family health?

10. What is the fire insurance rate in your community? How does it compare with the rates in neighboring communities?

Books for Class Reference:

Broadhurst, Jean. "Home and Community Hygiene." J. B. Lippincott Co.

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Pieper, C. J. & Beauchamp, W. L. "Every Day Problems in Science." Scott, Foresman & Co.

Trafton, G. H. "Science of Home and Community." Macmillan Co.

Williams, J. F. "Healthful Living." Macmillan Co.

Suggested Bulletins and Leaflets for Teacher and Student:

Cornell, Jr. F. D. "Farm Water Supply and Sewage Disposal in West Virginia." W. Va. Agr. Exp. Bul. 206:1–27, 1926, Morgantown, W. Va.

"Factors Governing the Protection and Selection of Sources of Water Supply." Sup. No. 39, U. S. Public Health Service, Washington, D. C.

"Federal and State Laws (compiled) relating to the manufacture and sale of foods, drugs, insecticides," p. 883, 1924, Standard Remedies Pub. Co., Inc., Washington, D. C.

Mendelsohn, I. W., and others. "Stream Pollution and Sewage Disposal." Vol. 25, No. 46, 1927. Iowa State Col., Ames, Iowa.

Pedersen, H. V. "Better Operation for Iowa Sewage Treatment Plants." Vol. 24, No. 37, p. 7, 1926, Iowa State Col., Ames, Iowa.

"Rules and Regulations of the Secretary of Agriculture Governing the Inspection and Certification of Fruits, Vegetables, and Other Products, Under an Act of Congress Approved Feb. 10, 1925 (Service and Regulatory Announcements)." Agricultural Economics 93, 1925. U. S. Dept. of Agr., Washington, D. C.

"Sewage Disposal for Suburban and Country Homes." (Sup. No. 58, Public Health Reprints) 1926. U. S. Public Health Service, Washington, D. C.

Waterman, E. L. "Small Sewage-Treatment Plant." Official Publication, V. 23, No. 31, 1924, Iowa State Agr. Col. Ext. Div., Ames, Iowa.

Wood, I. D. "Water Supply and Sewage Disposal Systems." Neb. Agr. Ext. Cir. 723; 1–24, 1926, Col. of Agr., Lincoln, Neb.

UNIT TWO

CONTAGIOUS DISEASES AND THEIR CONTROL

Introductory Studies.—1. Make a list of contagious diseases which have occurred in your family.

2. If possible, tell how they were *caught.*

3. For which of these diseases were you quarantined and how did the periods of isolation vary?

4. What preventive treatment for contagious diseases have you ever received?

5. Why is the fly called the "filthy fly"? Why is it also called the "typhoid fly"?

6. Compare present milk delivery in your community with the method formerly used; with that in some other community in your state. How does delivery in your community differ from that in some European communities?

Presentation of the Unit.—Have you ever passed a house with a placard "Scarlet Fever" posted upon it? Why was the sign posted? Perhaps you may reply that there is someone sick in the house and people must be kept out. If the person had a broken leg, he would be sick, but no sign would be posted. What is the difference in the two cases? In the case of scarlet fever the sickness may be passed on to other people. Such is not the case with broken bones.

A sickness which may be passed directly from person to person is called a communicable or contagious disease. Such a disease results from the invasion of the body by plants or animals so tiny that they can be seen only by using a high-power microscope. Just as a catalpa tree differs from a pine tree in its manner and rate of growth, and the resulting débris in its environment, so does one species of bacteria differ from another in its manner and rate of growth, and in the poison-

ous débris thrown off in the body. In this fact we have an explanation of the different symptoms of two diseases, such as smallpox and diphtheria. Why was the discovery of germs as the cause of disease by Pasteur hailed as epoch-making? Not until the cause of a disease was known could a treatment be evolved, and preventive methods established.

Fig. 68. Various forms of bacteria. A, spherical (cocci); B, rod-shaped (bacilli); C, spiral (spirilla). Note the reproduction by cell division. (From Buchanan.) Courtesy of Macmillan Co.

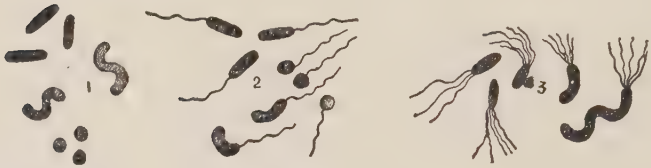


Fig. 69. Bacteria without and with flagella. Flagella are hairlike projections for locomotion. 1, bacteria without flagella; 2, bacteria with a single flagellum; 3, bacteria with several flagella. (From Buchanan.) Courtesy of Macmillan Co.

Another effect which is not so commonly noted may be mentioned. If the cause of a disease were not known people might say, "It is the will of God," and accept sickness as inevitable and not understandable. Now that the causes are known, sickness is brought from the realm of the supernatural into the control of man, and successful research becomes possible.

Scientists have explored the world of "the infinitely small" and have found a wide variety of bacteria, each kind

differing from all other kinds in appearance and effect. Since each organism is only a single minute cell, you would perhaps not expect that any difference in kind would be evident. If, however, you were to examine through a microscope a slide on which were mounted different kinds of bacteria, you would find the difference between kinds as definite as is the difference in varieties of trees or animals.

Certain kinds of bacteria are useful to man. Some are invaluable in agriculture through their work in the soil, others are used in the manufacture of such foods as cheese and butter. All of these and many others have the power to grow only in material which has no life. Other kinds have the power to invade the living body and cause disease. The disease-producing kinds are called pathogenic. Different pathogenic germs cause each of the following diseases: scarlet fever, diphtheria, pneumonia, tuberculosis, measles, smallpox, and the so-called venereal diseases, syphilis and gonorrhea. These last two are scourges that society is just beginning to fight and are enemies especially of the family and the child.

PROBLEM 1.—HOW CAN THE SPREAD OF CONTAGIOUS DISEASES BE CHECKED?

Where are these *enemy* germs carried in the body of a person sick from a disease? How do they get from the person who is ill to us? These are questions of great interest to any one who would safeguard his health. It is said that communicable diseases are spread from the excretions and secretions thrown off by the body. What would you list as excretions? What would you list as secretions?

If a person with a cold coughs or sneezes into your face, you may be infected through the germs carried in the tiny droplets of saliva sprayed into the air. If a person with

a cold in the head handles his handkerchief and then uses your pencil, your infection may result from the spread of his nasal secretion upon your pencil.

Preventing Contact Is a Means of Control.—The spread of disease by contact was recognized long before scientists knew about bacteria. If you were to turn in your Bible to the fifteenth chapter of Leviticus you would find given the laws that were enforced many thousand years ago to prevent the spread of disease by contact.

It is evident that direct person-to-person contact was not all that was feared. What else should be included under the term contact? Have you ever known a mother to say, "Now stay away from the baby because you have a cold"? Perhaps later you saw the older child rolling a ball to the baby from the other side of the room, or perhaps blowing on a horn and then tossing it to the baby to blow. Why did the rule, "stay away," fail to secure safety? Under contact should be listed not only the direct contact with the person, but also contact with articles touched by him. Handkerchiefs, forks, spoons, towels, pencils, and toys used by the sick, or foods from which they have eaten, may bring the well person in direct contact with the living disease germs from the sick.

Does your city have a rule against spitting on the walks or in public places? Such a rule is an effort against contact infection. The sputum of a person infected with a cold or with tuberculosis, ejected upon the side walk, may reach a toddler's toy or a person's shoe, and, through the handling of the article by the unsuspecting person, find its way into his body. Greater care should be taken to safeguard against such infection.

Safe Food Lessens the Danger.—In the previous Unit you studied the means by which a food supply should be

safeguarded so that health might be maintained. In the control of communicable diseases such care is most important. This point is illustrated forcibly by the case, often cited, of the man with septic sore throat, employed in a dairy, who was the unconscious means through his unsanitary handling of milk of starting an epidemic of this disorder. The statistics on the number of cases of tuberculosis among children traceable to the use of unpasteurized milk from infected herds also stress this point. By protecting the food supply the danger from communicable disease is lessened.

Safe Water Lessens the Danger.—Have you ever gone on a picnic and carried water with you because you thought you might not find *safe* water? What disease is most frequently carried by water?

Not infrequently some town or community has an epidemic of typhoid fever. Often it is traced to flooded streams bringing human wastes into the water supply. Living germs able to cause this disease are carried directly to those using the water. If water stands for some time in the sunlight the lack of food and effect of the light tend to destroy the germs. However, "boil suspicious drinking water" is a rule never to be forgotten.

An unguarded water supply is a constant menace to the health of the community. Every community should not only guard its water supply but should test it regularly and treat it by chlorination or some other method when suspicious conditions arise.

The Control of Germ-Bearing Insects Is Essential.—If you were making a list of the germ-carrying insects you would probably head it with flies. What other household pests were discussed in Section I, Unit IV, Problem 6 (p. 125)

To many people, the fly seems a small, ever-present

insect, to be treated with disdain, but not with fear. If it were possible to show such people the trail of the fly perhaps their ideas would change. The fly is dangerous as a germ carrier, in the first place because its anatomy is such that bits of filth and dirt adhere to it readily. If you will catch a fly and look at it under a powerful reading glass you will see the hairs on its feet that catch and hold filth. In the

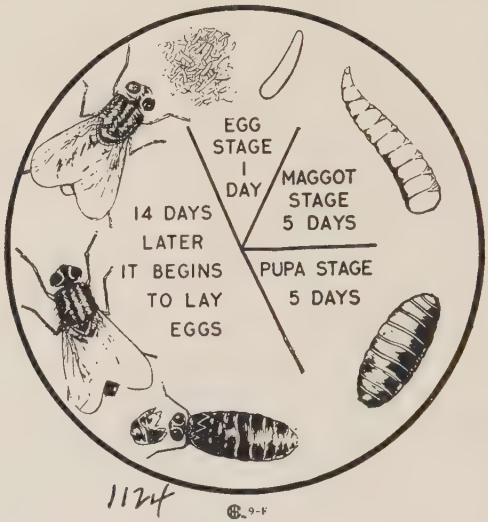


Fig. 70. Life cycle of a fly.
Courtesy of International Harvester Co.

second place, the fly lacks discrimination. It walks over filth in garbage, sputum in the street, wastes in the out-of-door toilets, and then flies to the food on our tables, fruit in the stores, bread in the bakery, or milk in the dairy. Wherever it goes it leaves a trail of filth and disease germs. The third reason for listing the fly as a dangerous enemy is the fact that it is so prolific. The female fly may lay from one hundred to one hundred and fifty eggs in a batch. Dur-

ing one season she may lay four or five batches, producing a total of more than five hundred flies. The fly's egg passes into the larva stage in less than a day's time; the larva becomes a pupa in five days' time; and after five days more the pupa becomes a fly. Within two weeks from the time the egg is laid, an adult fly, capable of laying eggs, may develop.

It has been computed that "a single fly in April may multiply and bring into the world 6,000,000,000,000 flies by September." The problem becomes more pronounced when you realize that a single fly may carry disease germs that will endanger the health of the entire family. Control of the fly is essential for health. How can it best be done?

If an attack could be planned that would eliminate breeding places, such as manure piles, rubbish heaps, open toilets, and uncovered garbage-cans, a great step would be taken toward controlling the fly. If, in addition to this, warfare could be waged on the adult fly, especially in the early spring, much ground would be gained. Protection of food from fly pollution controls the damage flies may do. This can be done only by complete screening of our kitchens and dining-rooms, and of the entire home if possible.

Next to the fly in importance as a disease-carrier is the mosquito. Perhaps you have heard that mosquitoes carried yellow fever, and have been most uncomfortable when you have heard the drone of one of the pests near you. You will be interested to know that there are three common classes of mosquitoes, one that may carry yellow fever, one that may carry malaria, and one whose only possible injury is its bite. The variety that carries yellow fever has been practically exterminated in North America; but the malarial mosquito is still to be controlled. It is most prevalent in the southern states, but sometimes is found in other sections.

If this mosquito bites a person infected with malaria, the malaria germ is taken into the mosquito's body. Later the mosquito may bite another person and pass the disease on. It is difficult even to estimate the lives and health lost through the ravages of malaria. How may this disease carrier be controlled?

The steps are not so different from those suggested for fly-control. Eliminating the breeding places, killing the larvæ and pupæ, and screening our homes so that we are protected from the adult pest are the measures usually suggested. Where do mosquitoes breed? How may the larvæ be killed? Doing away with water as in cans, pools, etc., near our homes and putting kerosene oil on the surface of ponds, eliminates breeding places.

The bedbug, the body-louse, and ticks have all been found to be carriers of different diseases. Whenever people are crowded together, diseases carried by these insects are likely to appear.

The Community Should Be Protected against Carriers.—Sometimes a person who is apparently well is found to be harboring the germs of a communicable disease in his body. Perhaps he has had the disease and recovered. Perhaps he has never had it. The germs may live in his body, and, though he is not sick, they make him a carrier of the disease to others. If the germs are carried by the contact method to some other person, that person may have a serious illness. Perhaps you have heard of Typhoid Mary, who, while not sick herself, caused many cases of the disease. Diphtheria and septic sore throat are often spread by carriers. Examination of suspected carriers and their isolation is frequently resorted to by public health departments to prevent the spread of these diseases.

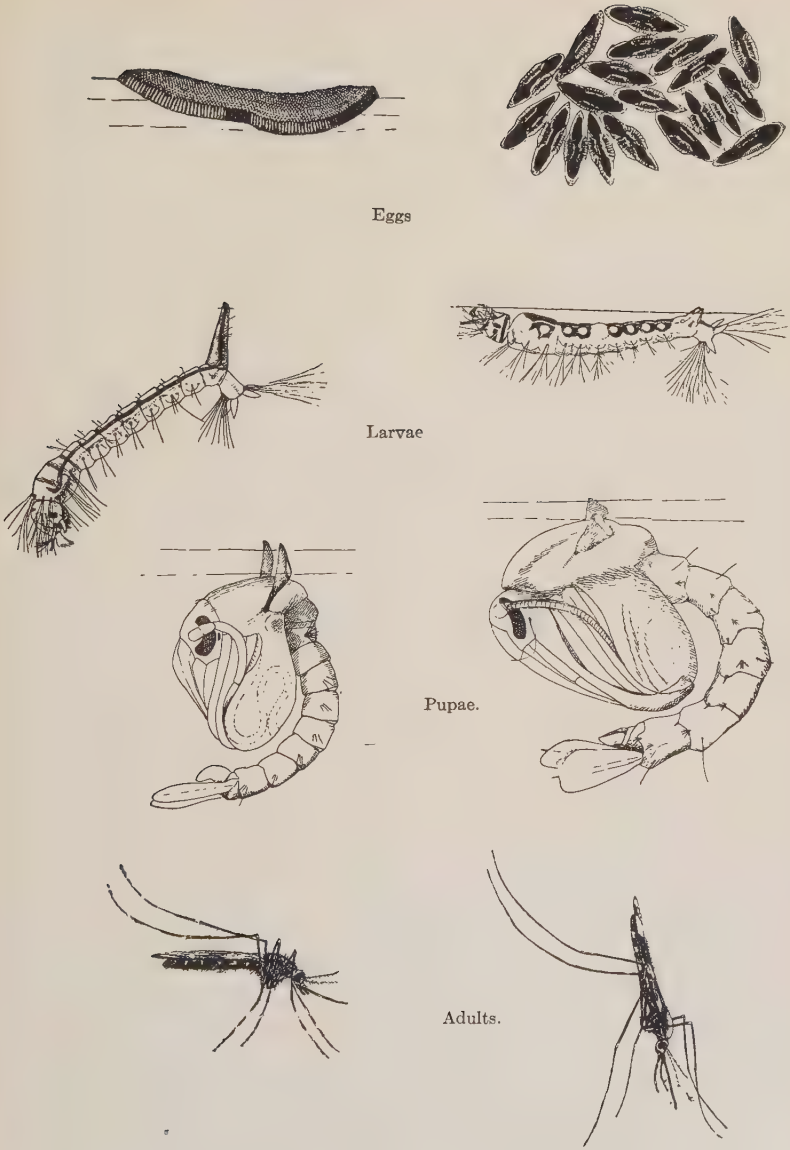


FIG. 71. Life history of mosquito. Left, house mosquito; right, malaria mosquito. Courtesy of Bureau of Entomology U. S. D. A.

Exercises.—A. Make a list of contagious diseases, and state how they are spread and how they may each be guarded against.

B. What diseases may be spread by careless practices on the part of individuals?

C. The city N———, in the state of Louisiana, had an epidemic of malaria. What specific measure should be taken to prevent a recurrence of the disease?

PROBLEM 2.—HOW DOES THE BODY PROTECT ITSELF AGAINST DISEASE?

The Body Has an Aversion to Spoiled Food.—Have you ever taken food which looked attractive, only to find that there was a foul odor from it that made it disgusting? Frequently the body is protected from infection through spoiled food by the disgust caused by unpleasing changes in the odor and flavor of foods.

The Mucous Membrane Serves as a Protection.—On returning from a trip on a train you may find your nasal cavities blackened with coal-dust and soot. What does this mean? The moist lining of the nose caught the dust and literally cleaned the air before passing it on to the lungs. If the dust is particularly irritating a secretion is set up which washes out the nose. In this way the mucous membrane guards the body.

The Skin Is a Protection.—Have you ever thought of the various ways in which the skin protects the body? Day by day you are in contact with air laden with bacteria, you bathe in water containing bacteria, and no infection occurs. The skin safeguards the body. If a cut or break occurs in it a serious infection may result. Antiseptics are used to prevent danger from resulting when such injury occurs.

The White Blood Cells Destroy Invading Bacteria.—It may be difficult to realize that there are in the body white blood corpuscles that have as great a part in a body's well-

being as have the red blood cells. The red blood cells may be regarded as the "Service of Supply" men who bring the supplies needed in form of oxygen. The white cells are the "Soldiers in the Trenches" who meet the enemy germs in combat. If the germs are very virulent, or if they are present in large numbers, they may overcome the white cells. The body's safety depends on the ability of the white blood cells to master the invaders and the ability of body cells to neutralize the poisons the germs produce.

FIG. 72. A, germ destroyed by white blood cell; B, cell destroyed by germs and the germs multiplying. Courtesy Macmillan Co.

The Body Builds Immunity.—When germs enter at any point, as in a pin prick through the skin, the blood is drawn to that point in increased amounts, and white blood cells swarm out and attack the germs, changing them into harmless, lifeless substances. At the same time the body cells are producing substances that will neutralize the poisons the bacteria produce. These substances are called "antibodies." Through them you are protected from another attack of the specific disease as long as they remain in the body. A person who has such protection is said to be immune.

Exercises.—A. What reasons can you give to explain why some individuals *take* a disease more readily than others?

B. Mary and Elizabeth are sisters. Mary is well and strong and seldom ill. Elizabeth *takes* every disease that comes along. What explanations can you offer for this?

PROBLEM 3.—HOW CAN THE BODY BE AIDED IN ITS FIGHT FOR FREEDOM FROM DISEASE?

Good Health Habits Are an Aid.—Have you ever heard the quotation, "Many people dig their graves with their teeth?" One of the best ways to keep the body free from disease is to choose food wisely. Much is known today concerning the body's need for minerals and vitamins as well as for protein and fuel foods. The body's needs must be met if health is to be maintained.

Sleep and rest have long been regarded as an important means of safeguarding health. How many hours do you sleep daily? How much time do you take for rest? For many people the rest taken in the early hours of the night seems more complete than that gained by sleeping late in the morning. For a high-school student nine hours of sleep is not too much.

Plenty of fresh air at a temperature not to exceed 70 degrees should be furnished. Studies show that minor variations in the temperature are stimulating and invigorating to the body.

The body needs exercise. If you have studied the complex muscular system of the human body, you realize that there is need for various kinds of exercise to bring all the body muscles into play. Walking is one of the best general exercises, but there are many muscles which are not developed by it. It is highly recommended that each person plan for the daily exercise necessary for his physical fitness.

Have you ever heard the comment that a certain person

is susceptible to cold because he is depressed? By depression is meant that he is discouraged and downcast. Usually these mental attitudes have a direct bearing upon the body processes. A buoyant spirit is a valuable means of keeping the body in good condition.

The Advice of a Physician Is Invaluable.—What is the doctor's business? Why is his aid invaluable? Doctors have spent many years acquiring information concerning the human body, its workings, and the disorders that affect it. Through their advice we can best plan the measures for our good health. No one thing goes as far to give us assurance of our health as does a yearly physical examination by our doctor. Is this plan used in your family? The advantages of it are: first, any evidence of disease is seen in the early stages and adequate treatment may be given; second, assurance of physical well-being is given the patient who is in good condition.

Should one become ill, the advice of a reputable physician should be sought. The dentist, as well as the doctor, can help you to keep well. Do you have annual inspection of your teeth?

Vaccines and Antitoxin Serums Are Helpful.—Have you ever been vaccinated for smallpox? Do you remember how this was done? How does the vaccination help the body to resist this disease? Vaccines may be said to mobilize the body's defense and to render it immune.

The first smallpox vaccination of which we have record was done in 1798 by Dr. Edward Jenner. Dr. Jenner found that the milkmaids who had had a *cow pox* on their hands were immune to smallpox. He then secured scabs from swellings on cows that had *cow pox* and placed some of this substance on scratches in the skin of people who wished to be protected. These persons developed a mild form of *cow*

pox and became immune to the disease of smallpox. This occurred long before the knowledge of bacteria was available. Imperfect as the knowledge was it saved the lives of people. Today the vaccine is prepared in pure form and the treatment is required for all school children. What other diseases may be prevented by treatment with vaccines?

Fig. 73. Jenner, through whose discovery preventive treatment of smallpox was possible. Courtesy of *Hygeia*.

Through the use of any one of these vaccines the body is stimulated to produce anti-bodies which aid in the battle against the disease germ.

Some diseases are not prevented by vaccine. Diphtheria was long a disease for which no vaccine was available, but now a toxin-antitoxin treatment is given which creates immunity for diphtheria. The *Schick test* is used to determine the need of such treatment. It is given to children who have never had the disease. First a tiny amount of toxin or diphtheria poison is put under the skin. If the child has a natural immunity, the anti-bodies prevent the toxin from having any effect. If there is no immunity, the point where the toxin was injected becomes red, revealing the lack of immunity; thereupon a dose of toxin-antitoxin is injected under the skin, creating an artificial or borrowed immunity. This toxin-antitoxin method of creating immunity where it

does not exist will, it is believed, eradicate diphtheria in a few years.

Until this was discovered, there was no preventive for diphtheria, but for thirty years antitoxin had been available for treating persons who had the disease. The way the antitoxin is secured is most interesting.

The diphtheria organisms are grown in the laboratory. The poisons produced in the process of growth are purified and freed from living germs, and are then injected, according to carefully scaled dosage, into healthy horses. This treatment lasts over a period of days. Time is given after each dose for the horse to develop in his body antitoxins to fight the toxins. As the treatment continues and the dosage is increased a large amount of antitoxin develops in the horse's blood. Blood is then drawn and clear serum is drained from the clot that forms. This serum is tested and standardized for the strength of antitoxin contained. It is used by physicians to inject into the body of persons ill with diphtheria.

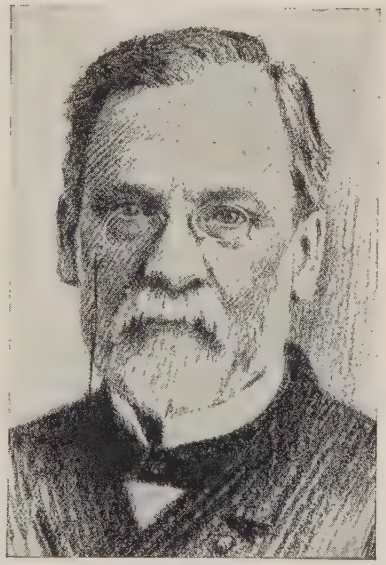


Fig. 74. Pasteur, whose discovery of the micro-organism as a cause of disease has revolutionized medical treatment. Courtesy of *Hygeia*.

Several diseases are still unconquered by vaccines. Among these are scarlet fever, for which a *Dick test* has been worked out to test immunity; measles; and tuberculosis. Science, however, is hopeful of the victory.

Exercises.—A. Make a list of contagious diseases and their corresponding vaccines, antitoxins, and serums. How successful have these been in preventing contagious diseases?

B. John and James have been exposed to diphtheria. In his examination the doctor found John immune. How could he determine this? He states that James must have preventive treatment. Outline the steps in the treatment which he will give James.

C. There is a smallpox epidemic in town K———. The city has ordered all school children vaccinated. Why was this done?

D. Mary is underweight, stays up late at night, and has a poor appetite. She has had several colds during the winter. What explanation can you give for this repeated infection?

PROBLEM 4.—HOW DOES THE COMMUNITY AID IN THE CONTROL OF CONTAGIOUS DISEASES?

Examination and Vaccination of School Children May Be Required.—So important is the control of contagious diseases that a yearly inspection of school children is required in some states. Children whose vaccination appears to have been unsuccessful and children who have never been vaccinated are required to have this treatment before they are admitted to the schools. What effect does having every child vaccinated for smallpox have upon the occurrence of this disease in the community? Upon what basis might a child oppose vaccination? Smallpox is not the only disease for which general treatment is required. In many communities children are given the *Shick test* to determine their susceptibility to diphtheria. Those lacking immunity, then, are given *borrowed immunity* by treatment with toxin-antitoxin for this disease.

Free vaccines and serum treatments for other contagious diseases are offered in many cities and states.

The thorough physical examination required of school children in some states is very helpful both to the parents and the community in the control of communicable diseases.

Often in this manner cases of tuberculosis are discovered in time for effective cure.

Tuberculosis Clinics Are Held.—Although no general health examinations are given to the adult population at community expense, special clinics afford free examination for certain diseases. The clinics for tuberculosis are per-

Fig. 75. Many communities provide health examination for the school child. Courtesy of *Hygeia*.

haps the most common service of this type. In some states these clinics are held twice a year; in others more frequently. Through them the aid of highly trained specialists is given to the local physicians in the diagnosis and treatment of this dread disease. An important feature of the clinic is its educational effect upon the community.

Isolation and Quarantine Regulations Are Made.—Only as the community makes and enforces rules and regulations for isolation and quarantine can the control of contagious diseases be made effective. What are the regulations for the quarantine of mumps and measles in your community? How are they enforced? What does an isolation card upon a neighbor's house mean to you?

Isolation and quarantine regulations are made not to help the people who are sick, but to safeguard the people who are well.

Fig. 76. A temporary T. B. Clinic. Courtesy *American Journal of Public Health.*

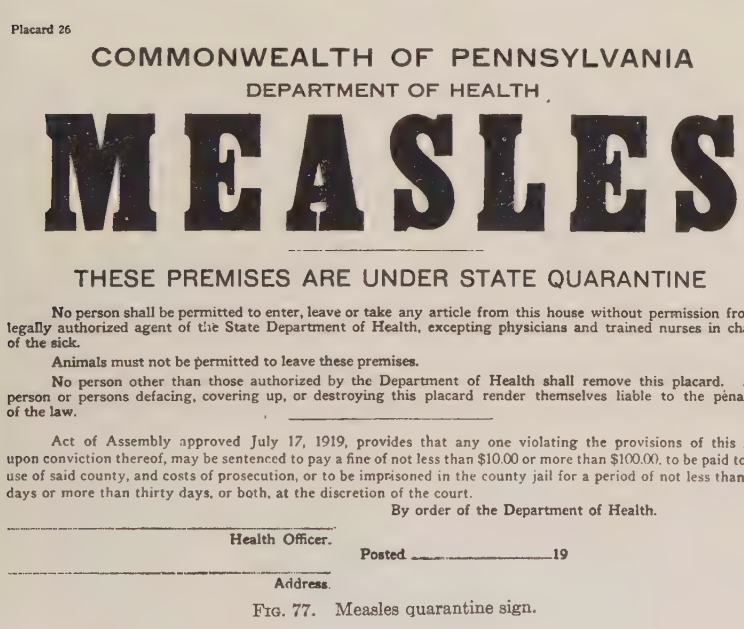
Community of Cooperation Is Essential.—Without the coöperation of the community, quarantines and isolations will not safeguard the health of the people. The community employs a health officer to control disease. Posting signs upon people's houses does not serve as a magic to keep the disease from spreading if people pass in and out in complete disregard of the warning.

Health publicity, however cleverly planned, that fails to bring to the home a sense of its responsibility, does little

for a community, even though it be an excellent pastime for the health officer. How may the home help?

The following measures are suggested as desirable coöperation for a home to offer the community in the control of the contagious diseases:

1. In case of suspicious symptoms, call the physician.



Placard 26

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF HEALTH

MEASLES

THESE PREMISES ARE UNDER STATE QUARANTINE

No person shall be permitted to enter, leave or take any article from this house without permission from a legally authorized agent of the State Department of Health, excepting physicians and trained nurses in charge of the sick.

Animals must not be permitted to leave these premises.

No person other than those authorized by the Department of Health shall remove this placard. Any person or persons defacing, covering up, or destroying this placard render themselves liable to the penalties of the law.

Act of Assembly approved July 17, 1919, provides that any one violating the provisions of this Act, upon conviction thereof, may be sentenced to pay a fine of not less than $10.00 or more than $100.00, to be paid to the use of said county, and costs of prosecution, or to be imprisoned in the county jail for a period of not less than ten days or more than thirty days, or both, at the discretion of the court.

By order of the Department of Health.

Health Officer.

Posted _____ 19

Address.

FIG. 77. Measles quarantine sign.

2. Do not persuade yourself that the disease is merely a "rash" or "only a cold" because you fear the inconvenience of quarantine.

3. When isolation or quarantine is declared follow the rules strictly.

4. Be frank with the physician concerning the appearance of the symptoms and manifestations of the disease.

An early release which costs an illness or possibly the life of some other individual is secured at a costly price.

If the realization that the well-being of all people counts for more than the convenience of a few is brought to the community, surely the coöperation of the homes can be gained. Then, and only then, will the control of communicable disease be possible.

Exercises.—A. What are the isolation and quarantine regulations in your state? Has your community any additional ones? How effectively are these regulations enforced?

B. On the house across the street is a card marked SCARLET FEVER. Why is this card on the door? How will its presence affect the activity of the home?

C. In today's paper there is a notice, "Free Tuberculosis Clinic, Tuesday and Wednesday, at the City Hall. Held by State Board of Health." What does this mean? Why is such a clinic held by the State Board of Health?

Objective Test.—Which words or phrases make these statements correct?—1. Communicable diseases are those which (a) are not contagious, (b) can be carried directly from one person to another, (c) are had only by children, (d) are caused by micro-organisms.

2. (a) Scarlet fever, (b) measles, (c) appendicitis, (d) earache, (e) pneumonia, (f) rickets, and (g) goiter are contagious diseases.

3. The spread of contagious diseases may be guarded against by (a) having a safe water supply, (b) preventing contact, (c) wearing asafetida around the neck, (d) having a safe food supply, and (e) controlling germ-bearing insects.

4. The body protects itself from disease by means of the (a) skin, (b) lungs, (c) mucous membrane, (d) liver, (e) white blood cells, and (f) saliva.

5. Plenty of (a) candy, (b) fresh air, (c) sleep, (d) parties, and (e) exercise help to keep the body in good condition.

6. Vaccines and antitoxin serums have been found helpful in protecting against (a) typhoid, (b) tuberculosis, (c) smallpox, (d) mumps, and (e) diphtheria.

7. The home can aid the community in the control of contagious diseases by (a) obeying isolation and quarantine rules; (b) by calling a

physician in all suspicious cases, and (c) by keeping all cases in the family a secret.

8. The typhoid germs are (a) easily detected, (b) not very dangerous, (c) transmitted through a wound in the skin, and (d) cause a disease of the throat.

9. Human carriers are sometimes responsible for (a) septic sore throat, (b) convulsions, (c) diphtheria, (d) typhoid fever, and (e) gall-stones being carried to other persons.

10. The discovery of germs as a cause of disease was made by (a) Jenner, (b) Hippocrates, (c) Pasteur and (d) Babcock.

Additional Problems and Exercises.—1. Prepare a culture of some bacteria to show how bacteria grow.

2. Make a health study of your community for the past year, reporting the contagious diseases and epidemics which have occurred.

3. What is the cost to the family for a child to have diphtheria, typhoid, or scarlet fever?

4. Make a poster on the control of contagious diseases.

5. Make a list of ten health rules which are an aid in avoiding contagious diseases.

6. How often are tuberculosis clinics held in your community? What is their work? What are the results of such effort?

7. Write a theme on "The Menace of the Fly."

8. Write a letter to a farmer's wife, telling her how she can rid her home of flies by protective attention to the outside toilet and manure piles.

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"The Prevention of Pneumonia." Metropolitan Life Insurance Co., N. Y. C.

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UNIT THREE

CARE OF THE PATIENT AND THE SICK-ROOM

Introductory Studies.—1. What room in your house is the most convenient for a sick-room?

2. In what ways could provision be made for caring for illness in planning a house?

3. What are four attentions which add to your comfort when you are ill?

4. Which member of your family is the best home nurse? Why?

5. Has any one at your home had training in nursing? Have you a home-nursing book in your home?

Presentation of the Unit.—You have often heard the comment that our first consideration should be *keeping well* since on our health depends the efficiency of our work, our enjoyment of life, and our service to others. Keeping well is so important that we should know not only the means to safeguard our health but the early indications of illness. Nature has certain danger signals that will warn us of health hazards if we heed them. Learning to know and to heed these signals, or symptoms, is necessary if you would be well yourself or help others to be well.

What symptoms do you associate with illness? Perhaps the most vivid and unmistakable symptom is pain. The sharp pain of toothache, the throbbing hurt of earache, and the dull ache of overtired muscles, all serve as warnings of wrong conditions in the body. Most of us heed the warning given us by pain.

Another symptom of illness is irritability. Perhaps you have heard a mother say, "Baby must be sick, he is so cross." If you have been ill you will recall how difficult

it was to be poised and serene. Other indications that are commonly accepted as denoting illness are pallor, lack of appetite, and nausea.

Important as these symptoms are they are not first on the physician's list. The symptoms that the physician watches in his study of a patient's condition are the temperature, the pulse, and the rate of breathing. Each of these indicates the condition of vital organs in the body. Taken together, they are the means of finding out the patient's general condition. Making note of these conditions may save a patient's life; careless, inaccurate observation may delay treatment, and may bring serious, if not fatal, results. It is well worth-while to learn to read these important signs accurately and to record them faithfully. Upon them will depend the nature of the care which a nurse must give the patient, the equipment required for this care, and to some extent the furnishings and routine of the sick-room itself.

PROBLEM 1.—WHAT ARE SOME IMPORTANT INDICATIONS OF ILLNESS?

Body Temperature May Indicate Illness.—The temperature of the body, like the temperature of the room or bath, is its degree of heat. It is the balance maintained between heat produced and heat lost in the body. In man this balance is established and maintained at a normal level at which the cells of the body function best.

Have you ever wondered about the intricate means by which your body kept at an even temperature regardless of whether you were skating in zero weather or lounging in the shade on a hot August day? This is done largely through the control of heat-loss from the body. In warm weather the heat-loss from the body is facilitated in every way so

that the balance is maintained. In cold weather heat-loss is conserved to a large extent.

The most important means of controlling body loss of heat is controlling that lost through the skin. There are centers in the nervous system which control the circulation of blood through the skin and the secretion of sweat. There circulates through the arteries and capillaries a large volume of blood flowing from the interior of the body. Naturally it yields heat to the cooler atmosphere that touches the skin. When the weather is warm and the body's need for heat-loss is great the nerve centers cause the blood vessels to dilate, permitting more blood to flow through. When the weather is cold and the heat-loss might be too great the nerve centers cause the blood vessels to contract so that less blood flows through the surface in contact with the cold.

The sweat centers, when stimulated, cause the secretion of sweat, which facilitates the loss of heat through its evaporation. They may be so affected by cold as to check the secretion of sweat. Increased respiration also aids in the loss of heat, as the expired air has been warmed and humidified.

There are, then, heat-regulating centers that act as thermostats, enabling man to maintain a normal body temperature of 98.6 degrees F. when measured by a thermometer placed in the mouth. If the thermometer is placed under the arm in the axilla the reading is slightly lower; if taken in the rectum it ranges about one degree higher. Variations within the limits of 97° to 99° (by mouth) are usually not significant. However, any further departure from normal temperature indicates there is something wrong with the body. Temperatures which are below normal are often overlooked, but they may indicate a serious condition just as truly as a very high temperature.

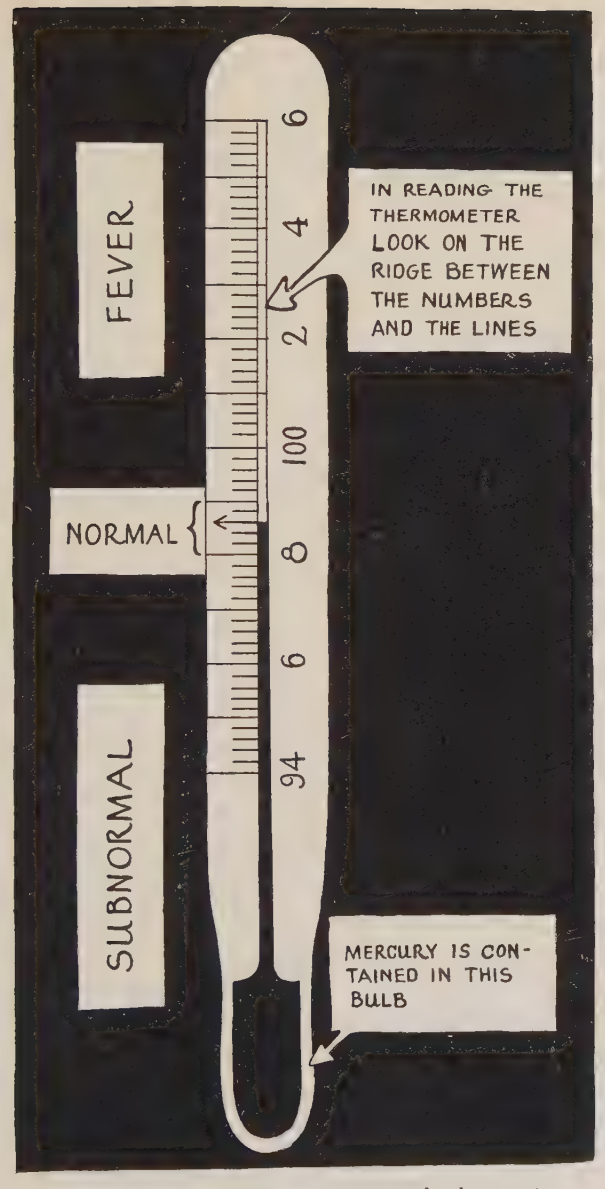


FIG. 78. Every person should be able to read a thermometer. Courtesy Ohio State University Division Extension.

When taking temperature by the mouth, dip the thermometer in alcohol and rinse in clean, cold water. Then shake down the mercury to the lower part of the tube. This is done by holding the end of the thermometer between the thumb and index finger and shaking with a quick wrist movement. If the mercury *does not drop*, put the thermometer in its case and slip into a stocking with the bulb end at the toe; then swing in a large circle.

After the mercury is shaken down, place the bulb of the thermometer in the patient's mouth under the tongue; he should close the lips, and allow it to remain for at least as many minutes as indicated on the thermometer. The patient should not be given hot or cold drinks immediately before inserting the thermometer in the mouth. After the thermometer is removed from the mouth, the temperature should be noted and recorded. The thermometer should then be cleansed with alcohol and wiped and put away. Do not put a thermometer in warm water or under a hot-water pad, or it may be ruined by over-expansion of the mercury.

The Pulse May Indicate Illness.—Next to the temperature in importance as a symptom is the pulse. You have probably placed your finger upon your wrist and felt the throbbing of your pulse. The pulse is the distention of the arteries produced by the wave of blood forced through them by the heart beat. If the function of the heart is interfered with; if the volume of blood is changed; or if the condition of the blood vessels is affected, a change will occur in the pulse. Taking the pulse rate, then, becomes an excellent means of securing vital information. Study and practice will develop skill in this important matter.

We speak of a "normal pulse rate" for an adult as being from seventy to eighty beats per minute. The average rate

is much higher than this during infancy and childhood and varies widely with different persons. The taking of the pulse rate has its greatest value when the normal pulse rate of the person is known.

In order to make an accurate count of the pulse, a watch with a second hand should be used for timing. Usually the pulse is taken at the wrist. When the count is being taken, the patient should be in a lying or sitting position. The home nurse places the index finger on the inside of the wrist about one inch below the base of the thumb and feels the pulsation of the artery. The beats are counted for one minute. Sometimes the pulse is counted by placing the index finger over the temporal artery in front of the ear.

The Respiration Is Also Important.—Through breathing we secure the oxygen we need from the air, and throw off certain waste matter. Normal respiration consists of a rhythmical rising and falling of the chest wall and the walls of the abdomen which occurs about eighteen times a minute, and is carried on unconsciously without effort, sound, or pain. Any change in rate or character of respiration may have grave significance.

In order to make an accurate count of respiration, a watch with a second hand should be used for timing. The patient should not be aware that the respirations are being counted, as the breathing should be quiet and natural, and his anxiety may alter the rate. Respiration is counted by watching the rise and the fall of the covering over the chest, or by gently placing one's hand over the chest. The count is usually made for one minute. As was stated, the normal respiration for adults is about eighteen per minute.

Much emphasis should be given to the careful observation of these three symptoms. If a person is in pain, or is irritable and pale, or uncomfortable in any way, he should

be made comfortable, and observations should be made on his temperature, pulse, and respiration. Whether these indicate illness or not, an effort should be made to determine the cause of the discomfort. If it is a slight cold, a case of gorging on candy, or some other regrettably common case of digestive disturbance, simple remedies may be supplied. Cathartics may be dangerous if the pain is from the appendix, which is located on a line between the navel and the point of the right hip bone; in such a case, or in any uncertainty, a physician should be called at once. In certain disorders delay is often serious. Even if the cause is known, failure of the condition to yield readily to home treatment should result in a call for medical aid.

Exercises.—A. Take your own temperature; count your own pulse; determine your respiration.

B. Take the temperature of a very old person; take the temperature of a baby at the arm pit. Compare these with your own.

C. Mrs. Brown's daughter, aged six, has the measles, and the doctor has asked for reports on the child's temperature. The mother has no thermometer but is depending upon her sense of touch to tell her the condition of the child's temperature. Why is this an unsafe practice?

D. Write out an explanation of the way in which a humid, "muggy" day affects your body's ability to lose heat.

PROBLEM 2.—WHAT ARE THE NURSE'S RESPONSIBILITIES?

In order to know what the person in the home should do when working with the physician in caring for someone who is ill, let us enumerate the responsibilities involved

The Physician's Orders Should Be Carried Out.—The physician, when called, makes a diagnosis of the case, and may give a prescription with general orders for the patient's care. It is the duty of the home nurse to see that these orders are carried out. We all know of people who seek aid

from the family doctor, and then fail to take the medicine because "it is nasty," or to go to bed because "it is tiresome." It is essential that the doctor's orders be followed. This responsibility rests on the home nurse.

A Careful Record Should Be Kept.—The home nurse should always keep a bedside record. The record of the temperature, pulse, and respiration are essential to the physician for intelligent treatment of the case. The memory cannot be depended upon, and significant information may be overlooked unless a record is carefully kept. Note should be made of the temperature, respiration, and pulse, and of the time at which they were taken.

The amount of medicine and the time of dosage should also be given, as well as the amount and time of food and water intake, and the elimination of wastes. A suggested record is given below. In addition to the items listed above, it also provides space for the doctor's orders, which should be written down. Special note should be made of any change for the worse.

The Nurse Should Care for the Patient.—What care does a sick person require? If his recovery is to be hastened, he will need physical care and relaxation. He will also need to be made comfortable and mentally at ease. Perhaps the easiest way to do this is to make him feel that you are doing things for him because they will help him, and that you want to do them. Care should be taken that there is no suggestion of "making too much trouble" or of a spirit of martyrdom on the part of the nurse. Above all, avoid an air of importance and mystery; nothing is so irritating. Any annoyance that would seem trivial to a well person is a matter of acute distress to the sick. The nurse in her care of the patient should remember that she is responsible for his physical and mental well-being.

Date.....Name of Patient.....

Date of Onset of Disease .....Name of Doctor.....

Time	Temperature	Pulse	Respiration	Solid and liquid foods	Medicine	Urine	Bowel movements	Remarks
A.M. 1:00	99	80	22	1 glass milk				Feet cold. Nails blue.
6:00								Slept all night.
8:00	98	75	19	1 tsp. Cascara				Partial bath.
12:00								
P.M. 2:00				1 glass water			B. M.	Pain in chest. Called Dr.
4:00								Alcohol bath.
6:00	102	95	30	Broth				Sponged to reduce fever.

The Nurse May Be Responsible for the Food.—Diet is often as important a factor in the treatment of disease as is medicine or surgery. Sometimes it is even more important. The home nurse may be requested by the physician to prepare the food to be served the patient if it differs from the food available in the family dietary. In this case, the written orders of the physician for the dietary should be carefully followed as to preparation, amount, and method of serving.

The Care of the Sick Room Sometimes Falls upon the Nurse.—Have you ever had a feeling of fatigue from living in a place where everything was in a state of disorder, con-

fusion, and uncleanliness? To the sick person, with less reserve in mind and body, such an environment may be most harmful. It may be the duty of the home nurse to keep the sick room in order. Through careful attention to the cleanliness and order of the room and its furnishings, a feeling of peace and quiet may be given to the person who is ill. What particular kinds of disorder do you find most unpleasant? Is your reaction heightened when you are sick? In making a room in the home suitable for the sick person, what do you think are the essentials to be considered?

Exercises.—A. Plan a daily routine schedule for a specific case of illness.

B. Class study a sample chart showing a patient's condition.

C. Mary's mother has been ill for two days. The doctor is concerned about her condition. He is depending upon Mary to have a report which will enable him to handle his patient wisely. What will Mary's report include?

PROBLEM 3.—WHAT CARE SHOULD BE GIVEN THE PATIENT?

Bathing Is Essential.—Sick people are often tired, uncomfortable, and feverish. In addition, the skin may be loaded with waste products excreted in the perspiration, and certain parts of the body, the feet in particular, may have odors which are offensive.

Bathing cleanses the skin of the waste products and bad odor, relieves discomfort from position, pressure, and heat, provides passive exercise, and refreshes the patient. It also induces rest and sleep. A daily bath should be included in the routine care of the patient. A bath should never be given immediately after food. At least an hour should pass between the meal and the bath. In giving the bed-bath the nurse should see that the temperature of the room is 70° F. Windows and doors should be so arranged

that all drafts may be prevented. The necessary materials for the bath should be assembled near the bed. A list of these is as follows: two blankets (old woolen), three bath towels, one face towel, two wash cloths, one night dress, good white soap, one tube of vaseline or cold cream, small cotton swabs, comb and brush, paste or mouth wash, tooth mug or glass with brush, nail file, scissors, one deep basin or foot tub, one bent glass tube, supply of hot water on hand and one slop jar or pail.

Care should be taken to prevent exposure or chilling. The patient is turned on the side, and a blanket placed underneath. The pillow is covered with a bath towel. A blanket is placed over the covers and the covers removed, without exposing the patient. Then remove the night dress, leaving the patient between the blankets. The bath usually proceeds in the following order: face, ears, neck, arms, chest, abdomen, legs, and feet. Then turn the patient on the side and wash the back and the buttocks, drying each part thoroughly as you proceed. The patient usually can finish the bath. Thorough and quick work is desirable. Special attention should be given to the ears, the space between the fingers and that between the toes, the arm pits, and the back. After drying the back, rub with alcohol to rest and refresh. Bath powder is often soothing and pleasing to the patient.

Other Details Must Be Given Special Attention.—Changing the gown of the patient needs to be done carefully. If the patient is helpless or very sick, the gown should be open all the way down the back. To prevent exposure, the clean gown is slipped across the chest beneath the soiled one. The sleeve of the gown to be taken off is taken from one arm, and replaced by the sleeve of the clean gown.

The opposite sleeve is changed in a similar manner.

Necessary lifting of the patient can best be accomplished by having him place his arms around your shoulders.

If the patient is able to help the following procedure has been recommended:

Place the patient on his back with knees flexed. Gather up the gown, having the patient elevate the hips while the gown is being drawn up to the waist line.

Bend down so that the patient may easily place his hands around over your shoulders. Raise the patient from the pillow and quickly slip the gown over the patient's head.

The attendant bends and lowers the patient back on the pillow.

Leaving the patient on his back with knees flexed, gather the clean gown up loosely and lay over the chest.

Bring the patient's arms through the sleeves, and fit the sleeves close up under the axilla or arm pits.

Raise the patient from the pillow as when removing the soiled gown and quickly slip the gown over his head and down over the back to the waist line.

Lower the patient back on the pillow as when removing the soiled gown.

Have the patient elevate the hips while the lower part of the gown is slipped down in place.

The proper care of hair is a great factor in the comfort of a sick person. The hair is easier to care for if it is short. In cases of prolonged illness, bobbing is the wise course. If, however, the illness is brief, care can be given that will preserve the hair, keep it neat, and at the same time secure the patient's comfort. In combing hair, take small strands and comb the tangles out of the ends first. If the strand of hair is held in your hand above the tangles, so that your hand can keep the pull from coming on the head, much hurt may be saved the patient. Usually a sick person rests

most comfortably in bed when her hair has been parted from the back of the neck to the middle of the brow, and braided in two braids, one on either side of the head. The hair should be combed night and morning.

Care of the Mouth and Teeth Is Most Important.—They should be kept clean and moist, and cleansed with an antiseptic wash. Usually, the mouth is cleansed at least three times daily, but patients with a high fever, or those who breathe through the mouth, require more frequent care. If possible, it is best to let the patient care for his own mouth. He should use his own tooth brush when available. After the teeth are brushed any particles that may have adhered between the teeth may be removed with a swab made of a tooth pick and a bit of cotton. An antiseptic wash of a kind known to be agreeable to the patient should be used. The mouth should then be rinsed with cold water. It is essential that all of this be done with as little exertion to the patient as possible.

Care Should Be Given to the Bed.—The bed should be furnished with a pad mattress-protector; a double blanket (either wool or cotton); a light weight counterpane; three pillow cases of regulation size, and as many more as will be needed for the extra small pillows; three sheets one yard longer and one yard wider than the bed; and a rubber sheet or oilcloth one yard square, which may be lengthened to the proper length by sewing a strip of muslin eighteen inches wide on each of two sides of the rubber sheet. This will provide for the extra length which will be needed for tucking under the mattress. If the sheets are not long enough or wide enough, they may be made so by sewing a strip of muslin, sufficient for the required dimensions, on one side or the end. This will avoid the pinning of the sheets to the mattress.

Certain methods which should be observed in bed making are listed below:

1. Collect all necessary material before beginning to make the bed.

2. Place the bed so that it is accessible to the home nurse from all sides, and the light does not fall directly in the patient's eyes.

3. Protect the mattress with a quilted pad or soft blanket.

4. Stretch the sheets so that they are free from wrinkles and are tucked in firmly at the head, foot, and sides of the mattress.

5. Observe neatness in the arrangement of the upper bed clothes. When making the closed bed, assemble all necessary articles and equipment; put the mattress in place, and cover with a protective pad.

Put on the under sheet with center folds in the middle of the mattress. Tuck under at the top of the mattress, then pull firmly to the foot and tuck in there. Miter the corners (fold like an envelope as in Fig. 79A) on the side on which you are standing and tuck in (Fig. 79B); follow this same process on the opposite side.

The rubber sheet should be placed about the middle third of the bed where the lower part of the back, the buttocks, and the upper part of the thighs will rest. Tuck in on either side of the mattress. Cover the rubber sheet with the draw sheet, which is an ordinary sheet folded lengthwise; tuck in firmly under the mattress on either side of the bed.

Place the top sheet with the hem wrong side up and the upper edge of the sheet on a line with the rim of the mattress. By placing the sheet with the hem wrong side up, the right side of the hem will be uppermost when the sheet is turned

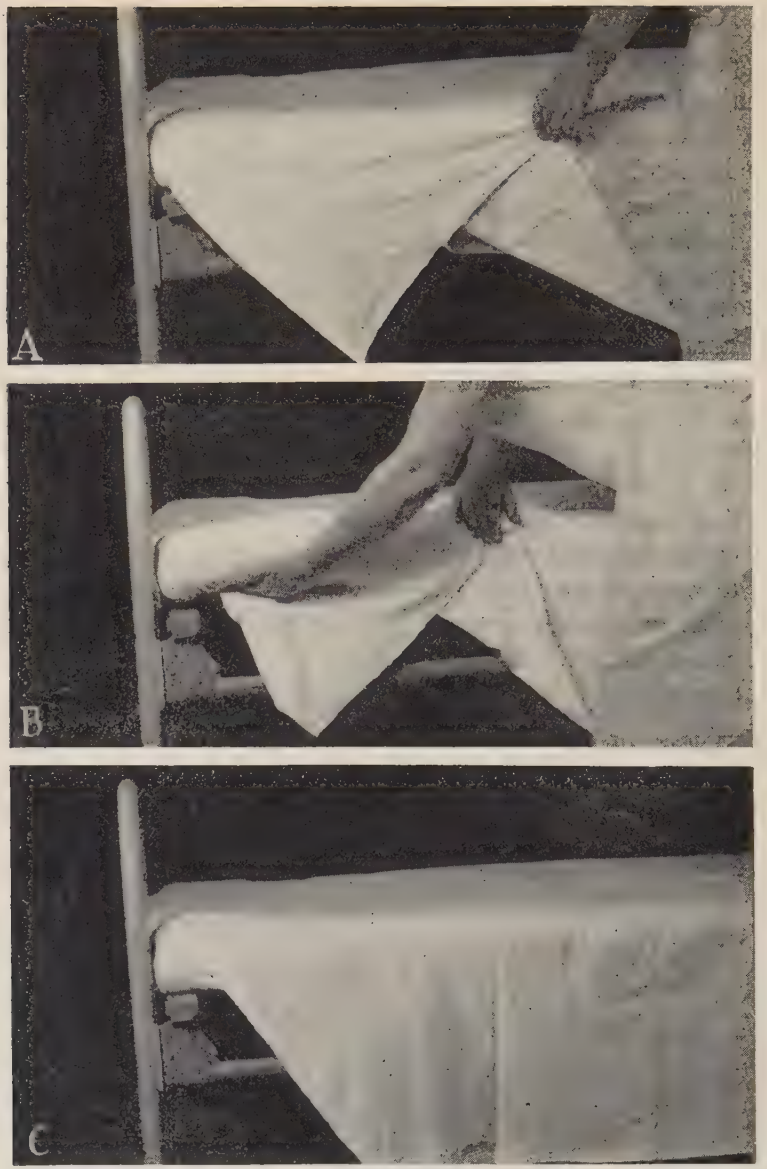


FIG. 79. The steps in making a bed. Courtesy of Kansas State Agricultural College.

down over the blankets and spread. Leave a fold in the lower part of the top sheet to allow room for the feet. Tuck the top sheet under the mattress at the foot, and miter the lower corners as in the under sheet. (Fig. 79B.) The sides may be allowed to hang.

Place the blankets with the upper edges about eight to twelve inches from the top of the mattress, leaving a fold in the lower part as in the top sheet, and tuck in at the foot. Place the spread so that the upper edge will be on a line with the upper edge of the blanket. Tuck the spread under the mattress at the foot, miter the corners (Fig. 79C) and allow the sides to hang. Turn the upper edge of the top sheet back over the spread.

The first pillow should be laid flat on the bed with the seam side toward the head of the bed and the open end on the side away from the door. The second pillow should be placed so as to stand upright with the seam side at the lower edge and the open end on the side away from the door.

When changing the under and draw sheets with the patient in bed, loosen the bed clothes from under the top, the foot, and the sides of the mattress. Turn the patient on the side facing the home nurse. Gather the draw sheet in folds close to the patient's back, after which do likewise with the rubber sheet and the lower sheet.

Go to the opposite side of the bed and place the clean lower sheet with center creases on the middle line of the mattress. Unfold the side nearest the attendant, leaving the opposite side in folds close to the patient's back. Tuck in at the top of the mattress and miter the upper corner. Draw the sheet down firmly at the foot and tuck in there. Miter the lower corner and tuck in along the side of the mattress.

Replace the rolled half of the rubber sheet and tuck in at the side of the mattress. Place the clean draw sheet with center creases on the middle line of the mattress. Unfold the side nearest the attendant, leaving the opposite side in folds close to the patient's back, and tuck in at the side of the mattress. Move the patient to the clean side of the bed; then go to the opposite side of the bed and remove the soiled linen.

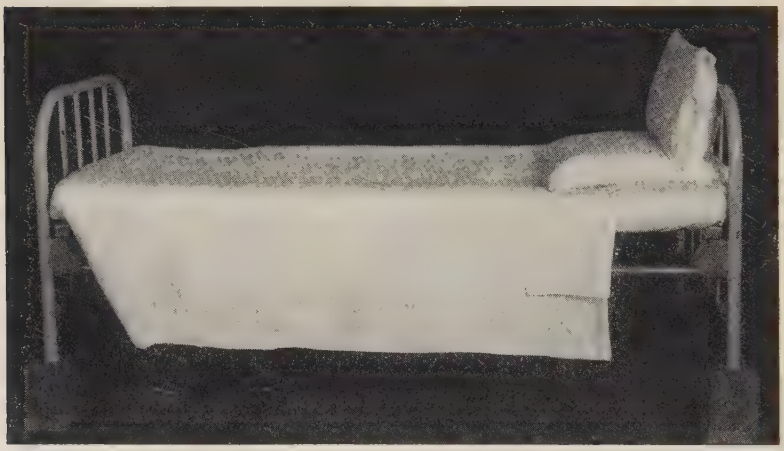


FIG. 80. A well made bed adds to the comfort of the patient.
Courtesy Kansas State Agricultural College.

Bring the lower, rubber, and draw sheets in place. Tuck the lower sheet in securely at the top and foot of the mattress, miter the corners, and tuck in at the side; after which tuck in the rubber sheet and the draw sheet also.

Pillows add to the patient's comfort. Usually only one pillow is used under the head of the patient, thus enabling him to be raised partially in bed by placing a small pillow under the small of the back.

A folded pillow or cotton pillow placed upright and

lengthwise under the knees will relieve tension on the muscles of the abdomen and make the patient comfortable.

The feet may be supported by pillows or a pad extending from the foot of the bed.

When a patient is weary of lying on his back he may be turned on his side, with a pillow placed at the back for support. Another pillow placed lengthwise between the knees and a small one supporting the abdomen may be used.

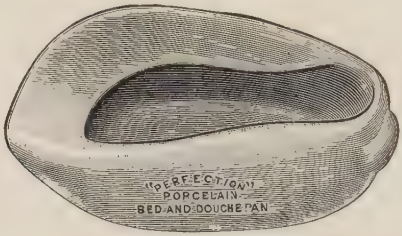
The Use of the Bedpan Should Be Understood.—A bedpan is a vessel used to receive the excreta of a patient lying in bed. Bedpans are of several types and are made in both enamel and porcelain materials. Although it is difficult to clean, the slipper bedpan is the most commonly used. When the bedpan is asked for, it and toilet paper should be brought at once to the patient. Delay may result in the desire for evacuation passing before the pan is available.

It is important that the pan be warm and dry before it is brought to the patient. The chill of the cold porcelain or metal may lead to retention of excreta. Warming the pan can be most readily done by allowing hot water to run over it. Care should be taken, however, that the bedpan is not too hot. The outside should then be carefully dried. A damp bedpan is disagreeable to the patient and difficult to adjust.

In preparation for the use of the bedpan, slip a newspaper or old sheet under the patient to protect the bed. Have the patient bend the knees. After pushing up the gown, the home nurse should put her left hand under the patient's hips, and with the right hand place the pan in place. It is often desirable to place a towel or folded cloth over the back of the pan to protect the patient's back and prevent spilling of excreta.

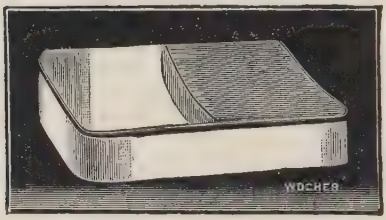
Toilet paper should be available when the pan is brought.

The patient should attend to his own needs if he is able. His hands should be carefully washed. If the home nurse must assist the patient, the parts should be wiped with soft



A. The "Perfection" porcelain bed and douche pan.

B. Bedpan.



C. Douche pan.

FIG. 81. Types of bedpans.
Courtesy of W. B. Saunders.

toilet paper and the pan removed with the same precaution that was taken when it was adjusted. It should be covered immediately upon removal. If there has been a bowel movement, the patient should be allowed to lie on the

paper or towel while the parts are washed with warm water and a cloth. Dry carefully with another cloth and burn both pieces. This step is not necessary if only urine has been passed. The newspaper or old sheet should be removed and measures taken to secure the patient's comfort.

The bedpan should be emptied and cleaned at once. It should be rinsed with cold water and any excreta which cling to the pan should be removed with toilet paper. The pan should then be scalded and at least once a day should be washed in hot soapsuds.

Certain Attentions Contribute Largely to Patient's Comfort.—Have you ever sat facing the light, unable for some reason to secure the lowering of a shade? Have you ever reached for something you wanted *very* much only to find you missed it by a very little distance? These and many other similar happenings afford much of the irritation in a sick person's day. A careful nurse will find that through thoughtfulness she can arrange to have a bedside table within reach, the window shade lowered, the glare from the electric light prevented, and many other similar annoyances solved. The sick person may not know the source of his annoyance. It may come from an uncomfortable position, fatigue from being up too long, a squeaking door hinge, or a lack of fresh water or fresh air. The alert nurse will make her patient comfortable.

Visiting in the Sick Room Should Be Limited.—The effect of visitors upon the sick depends largely on the visitor and upon the sick person's condition. The visitor who comes with a doleful story of death or disaster may work incalculable harm. A buoyant, cheery person may do great good. Since the patient's strength is limited, his callers should be limited to those whom he wishes to see, providing they are helpful. Chairs should be placed for the visit so that the conversation

may be easily heard. The bed must not be jostled or sat upon. Even a helpful visitor should make his stay brief.

It is sometimes necessary to exclude people by the statement that the physician has ordered no visitors. If these are the physician's orders they should be rigidly obeyed. In any event, the effect of visitors should be closely watched; they may often be a negative influence.

Exercises.—A. Demonstrate the making of a bed.

B. Demonstrate the making of a bed with a patient in it.

C. Demonstrate the sponge bath and alcohol rub with patient in bed.

D. Mrs. S. is ill. The physician says that her daughter shall allow no visitors in Mrs. S.'s room. Why does he order this? How shall her daughter carry out the order?

PROBLEM 4.—WHAT ARE THE CHARACTERISTICS OF A SATISFACTORY SICK ROOM?

In case of illness in the home it is necessary to select one of the rooms of the house and make it the sick room. There are several factors that should determine the choice of the room. First of these is the location.

The Location of the Sick Room Should Be Suitable.—It should provide a pleasant exposure, quiet, and restfulness for the person who is ill. Many persons prefer southern or south-western exposure. It is also desirable that the room be shut off from the main activities of the home, and yet that it provide as great convenience as possible for the nurse in her care of the patient.

What objections do you see to a front upstairs room, facing the street? It is rarely possible to have all the characteristics that we could name. The choice in each case must depend upon individual considerations. Regardless of the location of room, certain essentials should be secured.

Sunshine and Fresh Air Should Be Provided.—One of the best stimulants that a patient can have is bright sunshine. It brings warmth and cheer, and healing powers which even yet we understand but little. Do you know that Florence Nightingale said, "It is the unqualified result of all my experience with the sick, that second only to their

FIG. 82. Sunshine brings cheer to the sick room. Courtesy Div. Ext. Purdue University.

need of fresh air is their need of light." It is not only light, but direct sunlight, they want. Sunlight is not only a germicide but is a direct remedy for gloom and low spirits. Except when the case is such that the physician has ordered light excluded, sunshine is a prerequisite for any satisfactory sick room. Proper ventilation for supplying fresh air is as important a factor in aiding recovery from illness as it is in main-

taining health. It has been pointed out that air in motion with some slight variation in temperature has a distinctly helpful effect. Ventilation without a draft should be arranged in the sick room. How can this be done?

The Temperature Should Be Controlled.—Various investigations show that the best average temperature is from 64° to 68° during the day and a little lower at night. It is desirable that the air be not too dry, as such air makes one feel cold through the increased evaporation of sweat on the skin. A thermometer should hang in the sick room, and the temperature should not be allowed to go above 68° except in the following instances:

1. When the doctor orders it.
2. During all baths.
3. During all treatments when exposure may be necessary.
4. If the doctor has to make a prolonged examination.
5. For the first times when the patient sits up in bed or out of bed.

The temperature should not be lowered much below 68° except in the following cases:

1. When the doctor orders it.
2. When the patient is asleep, unless the doctor orders it otherwise.

Furnishings Should Be Simple.—The furnishings of a sick room should be plain, durable, free from decoration, and easily cleaned. All elaborate or unnecessary furniture should be put away, leaving for the sick room only those articles essential for the care of the patient. The coloring of the walls should be plain, free from disturbing design, and soothing to the eyes. The floor should be of neutral tones that are unobtrusive. The freedom from striking colors and confused design, and the simple furnishings, make a restful

environment that is a factor in the peace of mind of the sick person.

Cleanliness and Order Are Important.—Disorder and dirt alike breed discouragement and discomfort. The sick room should be clean. Flowers should be watered and arranged, the tables, chairs, and dressers should be dusted, and the room should be kept equally free from foul odors and disinfectant smells. Food should never be allowed to stand in the sick room. A sense of well-being comes to the patient from having a clean, orderly room.

The Arrangement Should Contribute to the Patient's Comfort.—In arranging the sick room care should be taken to place the bed so the patient will not look squarely at a door or towards windows. The arrangement should be such as will free him from eye fatigue and the stress of nerve strain. A pleasant outlook, if not direct, adds greatly to the possible sources of interest of the convalescent. The amount and source of light are important. Light sometimes causes headache, nervousness, and sleeplessness. Windows should have shades that can be drawn. At night the light should be shaded. If a temporary shade is devised it should not be grotesque nor poorly supported. Sometimes newspapers are pinned about a light globe. The light may be effectively screened in this manner, but the improvised shade may seem so temporary as to be a worry to the patient. A bedside table should be provided to hold the small articles the patient may need or desire.

Exercises.—A. Compare two bedrooms in your home as to the relative merits of each for use as a sick room.

B. The physician is not pleased with the sick room of Mrs. S. He says that there is too much noise from the street, that the room is too dark, and that there are too many furnishings in it. He wishes a change. What suggestions can you make in this regard?

PROBLEM 5.—WHAT SIMPLE APPLIANCES WILL BE FOUND USEFUL IN THE SICK ROOM?

Devices to Give Support Are Useful.—The person who is confined to his bed grows weary of lying down. His

FIG. 83. An improvised back-rest made from a wash-board affords change in position. Courtesy Kansas State Agricultural College.

muscles become cramped. A change in position is often the only rest possible. Hospital beds have equipment by which the head of the bed can be raised and the patient brought to a semi-sitting position. Such equipment is not feasible for the home, and inexpensive substitutes must be used.

A back-rest may be made. A wash-board may be placed against the headboard of the bed and tied with strips of muslin to the bedposts. This may be padded with a large pillow placed lengthwise and other pillows arranged in front of this.

FIG. 84. A bed cradle may relieve pressure of heavy covers upon the feet. Courtesy Div. Extension Kansas State Agr. College.

Bed-cradles are used to remove the pressure of the bed covering from the sensitive parts of the body. They are most frequently used over the feet or abdomen.

If used over the feet, they may become cold, so a hot-water bag should be used. If the cradle is used to protect the abdomen, it should extend beyond the body on each side and be high enough to hold the covers from the abdomen.

A bed-cradle may be made in the following manner: Cut a wooden barrel hoop in two and cover each half with a roller bandage or muslin. Cross the barrel hoops at right angles and tie at the center with a strip of bandage in such a way that the bandage will form an X on either side, thus holding the hoops in a firm or fixed position.

Cotton rings make a good substitute for rubber air rings and are less expensive. They are used for the relief of pressure from the heels, elbows, shoulders, head or ears, or any part of the body where a small area needs support (Fig. 84). The size of the cotton ring depends upon the size of the area to be supported. To make a cotton ring, wind a strip of cotton batting made in the form of a ring with a roller bandage.

Devices to Furnish Heat Are Useful.—The two general ways in which heat is applied to the body locally are as moist heat and dry heat. Moist heat is applied through poultices, stupes, and hot foot baths.

Very hot stupes relieve pain, reduce swelling, increase the functional activity, and raise the temperature of the part. They are frequently used in toothache, earache, tonsilitis, laryngitis, and bronchitis.

Stupes or fomentations consist of two or more layers of soft flannel or blanket wrung as dry as possible out of boiling water, applied directly to the skin, and covered with a piece of oiled paper or light rubber sheeting at least an inch wider than the stupe to retain the heat and moisture. They may be held in place by bandages.

To avoid scalding the hands, a stupe wringer should be used. The stupe wringer is best made of three-fourths of a yard of stout roller toweling, fifteen to eighteen inches wide.

Fold a hem lengthwise of the material on each side with the edges meeting in the center. Turn a hem at each end

wide enough that a broom stick will pass through and fit snugly. Place two rows of stitching one-eighth of an inch apart at the edge of each hem.

Fig. 85. The use of a stupe wringer makes hot applications possible
Courtesy Div. Extension Kansas State Agr. College.

Run a piece of broom handle eighteen inches long through the hem at each end, pushing the cloth to the center of the handles to form a little pocket.

After placing the stupe in the wringer, put the wringer

in a basin of water with the sticks resting on the sides of the basin, and place the basin on some arrangement for heating the water. After boiling for a few minutes, remove and wring quickly, twisting the ends of the wringer in opposite directions (Fig. 85). The flannel should be wrung as dry as possible and should be shaken a moment or two in the air before applying to allow the steam to escape.

The application of the stupe is frequently ordered at regular intervals of from ten to twenty minutes. Between intervals apply sterile vaseline to the area being stuped.

Dry heat is supplied by electric heating pads, hot-water bags or bottles, and sand or salt bags.

A hot-water bottle is a very necessary piece of equipment in treating local pain, and may be applied to the abdomen to relieve pain in the pelvic organs.

The most commonly used hot-water bottles are made of rubber. Frequently these become dry and crack and then when an emergency arises are useless. Bags made of aluminum are on the market and wear for years. However, they are not soft and pliable to the flesh as are the ones made of rubber. Fruit jars filled with hot water and sealed, hot irons, and bricks make good substitutes for the hot-water bottle. An excellent foot-warmer is made by filling a flat-bottomed vinegar jug with hot water. This can be tied to the foot of the bed and will retain the heat much longer than an ordinary hot-water bottle.

In filling a hot-water bottle certain precautions should be observed. The water should be of a temperature between 130° F. and 140° F., the bag should not be filled too full, and all of the air should be expelled before screwing on the cork. After the cork is screwed on, the bag should be held cork side down to make sure that it does not leak. A hot-water bottle cover should then be placed over the bag before

placing it near the patient's body. When putting the bottle away, it should be drained completely and dried, if rubber, and the cork screwed in with air in the bottle. By this method the sides of the bottle are prevented from sticking together.

Sand bags or salt bags may be made of denim or bed ticking. The usual size is nine by twelve inches. They

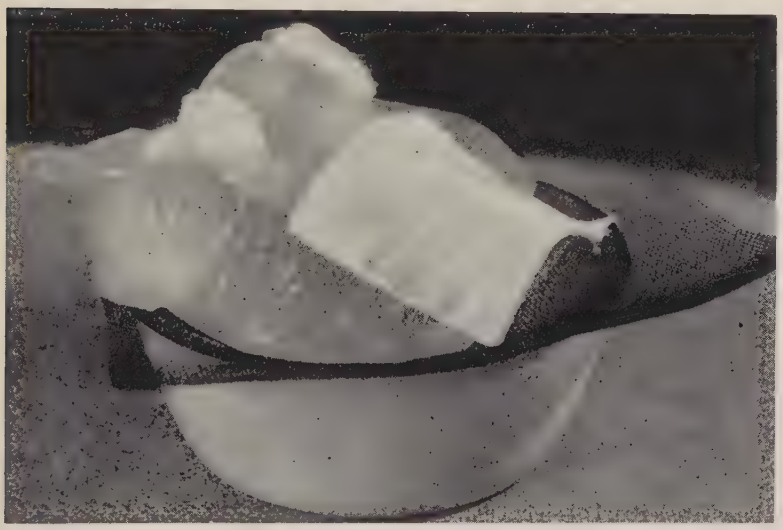


Fig. 86. A pan and wire screen make the use of cold compresses easy. Courtesy Div. Extension Kansas State Agr. College.

may be heated in the oven to the temperature desired. They retain their heat well, and a set of three makes possible very effective application.

Devices to Furnish Cold Are Useful.—Cold may be applied to the body through either ice bags or cold compresses. In general, cold applications are ordered by the physician to check inflammation and abscess forming, to

prevent or reduce swelling, to relieve pain, and to prevent discoloration. They may be applied to bruises, sprains, burns, boils, and the like.

When the doctor orders moist cold applications to the eyes or to a wound, the following suggestions are found helpful in keeping iced compresses:

Cover a basin with a wire screen, place a piece of ice on the wire screen, and let it drain in the pan beneath.

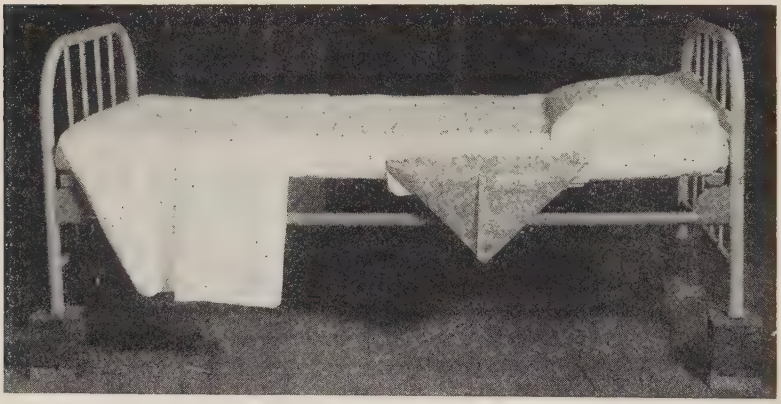


FIG. 87. The height of the bed may be raised by wooden blocks. Note the bed pocket attached to bed.

A piece of cheesecloth or old muslin tied over the basin with tape is sometimes used instead of the wire screen.

Place the pieces of absorbent cotton or clean cloths to be used as compresses on the ice (Fig. 86). In case of discharge, the cotton or cloths should be burned after using.

Ice bags and caps are made of rubber and are not durable. They are made in several shapes and sizes so as to fit the different parts of the body. These bags should be filled about one-half or less with finely crushed ice. The air

should be removed and the bag corked and covered so as not to come in direct contact with the skin. Before putting away the bag it should be thoroughly dried and packed with a small amount of cotton to keep the sides apart.

Devices for the Bed Are Aids.—Most home beds are so low that fatigue and backache result to the home nurse when such beds are used in the case of sickness. The bed may be elevated by the use of four wooden blocks six inches by six inches by eight inches. A twenty-penny nail should be driven into the center of each block, leaving about one and three-fourths inches extending upward from the block after cutting off the head of the nail. Remove the castors from the bed and set the legs on these blocks.

The bed pocket is used to hold discarded handkerchiefs, papers, and similar materials. Four thicknesses of newspaper should be used to make the bed pocket. Turn one corner down half way the length of the newspaper, making a triangle. Bring its opposite corner over to meet it and paste the edges together. This forms a large triangular pocket.

Fold the long upper edge down to make a stronger edge and pin with safety-pins to the side of the mattress within reach of the patient. (Fig. 87).

Exercises.—A. Class construct and demonstrate the use of bed-cradle, back-rest, foot-board, and cotton ring.

B. Class demonstrate the use of stupes, salt bag, hot-water bag, and ice bag.

C. Lucy became ill in the night and suffered very intense pain. The doctor ordered hot, dry applications. How could this be done? When Jane was ill the doctor ordered hot, moist applications. How was this accomplished?

Objective Test.—Can you find in the list of words on the right the correct word for each of these blanks?—

1. The common symptoms associated with illness are ————, ————, ————, ———— and ————.

2. The symptoms which a physician watches are ————, ———— and ————.

3. A good nurse carries out the physician's ————.

4. The nurse should do every thing in her power to make the patient ———— and ————.

5. The patient should never be given a bath immediately after ————.

6. A carefully made bed adds to the ———— of the patient.

7. ———— in the sick room is not a desirable practice.

8. A sick room should be provided with ———— and ————.

9. The furnishings of a sick room should be ————, ————, and ————.

10. A pleasant ———— sometimes adds to the comfort of a convalescent patient.

11. ————, ———— and ———— are devices which can be made at home and add to the patient's comfort.

12. A ———— is a good means of applying dry heat.

1. Orders
2. Nausea
3. Fresh air
4. Back rests
5. Pallor
6. Comfort
7. Bed-cradles
8. Pulse
9. Sunshine
10. Cotton rings
11. Lack of appetite
12. Salt bag
13. Respiration
14. Durable
15. Pain
16. At ease
17. Eating
18. Irritability
19. Easily cleaned
20. Outlook
21. Visiting
22. Comfortable
23. Warm
24. Plain
25. Temperature
26. Thin

Additional Problems and Exercises.—1. What are the characteristics of a good nurse?

2. Plan a demonstration in the use and care of the bedpan.

3. What are the characteristics of a good patient?

4. What is your opinion on the advisability of admitting visitors to a sick room? Explain your reasons.

5. What precautions should be taken in caring for patients ill with contagious diseases?

6. Plan and give a demonstration of feeding a helpless patient. See Harmer, *Principles of Nursing*, pp. 90–93.

Books for Class Reference:

J. A. Delano. "American Red Cross Textbook on Home Hygiene and Care of the Sick." P. Blackiston Sons.
Harrison. "Textbook of Home Nursing." Macmillan Company.
Lippitt, L. C. "Personal Hygiene and Home Nursing." World Book Co.

Suggested Bulletins and Leaflets for Teacher and Student:

Martin, Pearl M. "Health for Farm Families." Kansas Extension Service, Kansas State Agricultural College, Manhattan, Kansas.
Stebbins, M. E. "Health and Home Care of the Sick." Missouri Agricultural Extension Circular, 181:1—10, 1926, Missouri Agricultural College, Extension Division, Columbus, Missouri.

UNIT FOUR

FOOD FOR THE SICK

Introductory Studies.—1. What are some things which make your food appetizing when you are ill?

2. State three reasons why a sick or convalescent person should have specially-prepared food.

3. Name five dishes which you have known to be served to sick persons.

Presentation of the Unit.—Have you ever thought of what you are supplying your body when you eat your meals? The word "food" is an easy reply but it does not answer the question. What does food furnish you?

Long ago a Great Leader said, "Know ye not that ye are the temples of God and that the Spirit of God dwelleth in you?" If you think of your body as a house or a temple in which you dwell, and food as the means by which it is kept in order, it may be easy for you to visualize what food should furnish to your body.

(1) Like a house, the body must be supplied with material for building and repairing its structure. The particular foods that meet this need for the body we class as proteins. How would you know, without a chemical analysis, that the protein material needed for building and repair of body tissues would be found in milk, eggs, cheese, and meat? If we continue to think of the body as a house, what is another need that houses have? If people live in houses the rooms are heated and energy supplied for the activity of the home.

(2) The body must likewise have food that will supply heat and furnish it with the means for the work to be done

through it. What are the common fuel foods? Sometimes sugars are likened to kindling, because they are readily used by the body. The starch furnished by the different cereals and vegetables is referred to as the wood for the body's stove, and the fats are likened to coal. Can you explain such a comparison?

(3) In addition to building the house, keeping it in repair and warm, and with energy for the work to be done, it must be kept clean. Brooms, soap, and water are used that the house may be kept in order. Certain foods might well be listed as cleansing foods because the cellulose content serves as a broom in keeping the intestines free from waste. Other foods have cleansing power as laxatives because of their content of certain substances. Can you name some of these? The body needs water to flush out the wastes, to aid in digestion, to maintain the fluids of the blood and tissues, and to regulate body temperature, as well as for other reasons. Personal well-being can be maintained only when adequate water is given. Returning to our comparison of the body with a temple or house, can you think of other needs of the structure that would not come under building, heating, or cleaning?

(4) Have you ever seen a well-built, clean house in need of paint? Our bodies need the color of health that will not be given by paint applied to the exterior as you would do with a house. We need vitamins and iron, calcium and certain other mineral substances to keep the color of health in our faces and the spirit of well-being in our bodies. These come especially from milk, fruits, and vegetables, including leafy vegetables, which are particularly good for vitamins.

How will sickness affect the need of the body for food?

Adequate food in a useable form is essential for recovery. It has been frequently said that in regaining health food is

of more importance than the medicine given in the treatment of the disease. If patients do not have the proper foods they may actually starve; if given the wrong foods, death may result.

Have you ever thought that because a person was in bed he did not need food? What food needs may be changed because the person is not active? What food needs may become higher?

How does illness affect the useability of food?

Nearly all forms of illness are accompanied by digestive disturbance. Frequently this is due to lack of exercise, poor circulation, or generally lowered vitality. The patient who is not able to exercise may have difficulty in maintaining a good appetite and regular excretion. These factors should be considered in the diet.

The doctor's orders should be rigidly followed in regard to diet. Obedience in this regard is an important part of the nurse's responsibility. The diet is a part of the treatment and should be as carefully followed as the giving of medicine. The diet may be *salt-free*, being so planned that the patient will not receive any food containing salt. It may be *restricted*, certain foods being strictly omitted; or it may be a *weighed diet*, in which only a stipulated amount of each food is given. Nothing should be given to the patient to eat or drink unless it is included in the dietary prescribed by the doctor. The family should remember that a sick person is not responsible and his pleadings to be permitted to violate the doctor's rules should be tactfully refused.

PROBLEM 1.—HOW DOES THE DIET FOR THE SICK AND CONVALESCENT DIFFER FROM THE FAMILY DIETARY?

Since illness brings added work and responsibility to the members of the family, it is important that the differ-

ence between the food for the sick and the food served on the family table be clearly understood. Frequently unnecessary fatigue and strain is carried by the home nurse because she fails to realize the possibility of using to the full the available desirable foods from the family dietary in planning food for the sick room.

Illness Limits the Body's Powers of Digestion and Assimilation.—Have you ever taken a trip to a strange city or town to visit relatives whom you did not know? Perhaps because of the strangeness of the house and family, and the differences in meal and bedtime hours, you found your appetite failed you and that you were unable to sleep. The person who is ill may find himself in a similar situation. He has none of the accustomed daily routine, his illness may make him feel that the room is peopled with strange persons, and the condition of his mind may be unfavorable for proper body reaction. It is a well-known fact that nervousness, monotony, irritability, pain, and worry affect the digestion. Through these emotions the secretions of the digestive juices are inhibited. Further, these same emotions affect the secretions of the glands that govern not only the metabolism, but also such organs as the heart. The person who is in pain cannot digest and assimilate food as he could under normal conditions.

Perhaps the food most generally used in illness is milk in some form. Since it is readily digested, high in food value, and easily served, milk has been regarded as the basis of the diet for the sick. Eggs are also valuable. Cereals, soups, custards, ices, and fruit juices are frequently served. For the first day or two of illness a patient may be given very little food to avoid stress on the digestive tract; but even at this time care should be taken to provide an adequate liquid diet. After this period an attempt should be made to meet the food requirement of the patient.

The family dietary is planned for the active, well members of the family. It will include dishes that are either by food content or method of preparation unsuited to the limited digestive ability of the sick. Can you name some of these foods?

Certain Foods Are More Readily Used.—There are many foods that form a part of the family meals that are suitable for the diet of the sick also. Can you list some of these foods? Time and effort can be conserved by utilizing as much as possible those dishes of the family dietary that are suitable in planning the food for the patient.

Exercises.—A. William is ill with a severe cold. He has some temperature and is in bed. How will his diet differ from that of the other family members?

PROBLEM 2.—HOW SHALL WE PREPARE AND SERVE THE DIET FOR THE SICK?

For the sick person one of the most important events of the day is the coming of meal-time. If the food is attractively served, and is wholesome and well prepared, the patient's contentment and enjoyment will be increased.

A few simple rules may aid in meeting this problem.

1. Make the patient comfortable before bringing in the tray. This includes attending to the toilet needs, the arrangement of pillows, the washing of hands and face, and putting the room in order. Often the appetite fails because the food has been in the room while these needs are being met.

2. Do not spoil the patient's appetite by planning his tray with him or by permitting him to see food in large quantities or by discussing food prejudices in his presence.

3. Serve the meal promptly. Since the meal is an event, delay of a few minutes seems important to the patient.

4. The food should be well chosen, properly cooked, and daintily served. Hot foods should be served hot, and cold foods served cold. Scorched cereal, burned toast, or greasy soup may upset the patient's day.

5. Make sure the tray is complete before taking it in. Delay due to a missing napkin or spoon is unpleasant. The dishes should not be chipped or cracked and there should be no spilling or slopping of food on the tray.

6. The patient should not be hurried, nor should he be allowed to exert himself. The portions should be small.

7. No food should be permitted to stand in the sick room. The odor alone is often sufficient to take away the patient's appetite.

Food Is Commonly Served as Liquid, Semi-liquid, Semi-solid and Light.—Liquid diet is made up of fluid given every two hours, the total amounting to about six pints daily. It is usually planned to meet the energy needs of a person at rest. Milk, broths, egg-nog, fruit drinks, and albumen waters are commonly served on liquid diet.

Soft diet includes, in addition to the liquid diet, certain easily digested foods.

Light diet may contain, in addition to the foods listed under soft diet, a limited amount of the more easily digested meats.

In the preparation of any of these foods there is no unusual ability or knowledge necessary. Many of the dishes are often served on the family table. The work of caring for the patient can be lessened by planning the food for the patient at the same time the family dietary is planned. Much time can be spent fruitlessly in unnecessary food preparation. In the following lists for *liquid*, *soft* and *light* diets, star the foods that might be used in the family meals.

The table given below summarizes the dishes often used in diet for the sick:

Classification of Foods for the Sick

Liquid Diet	Soft Diet	Light Diet
Fruit juices	Cooked cereals	Scraped steak
Albumenized milk	Soft-cooked eggs	Creamed chicken
Egg-nog	Milk toast	Creamed carrots
Meat broth, beef tea, beef juice	Custards	Creamed celery
Barley water	Tapioca	Spinach
Various fruit juices (diluted)	Rice	Strained turnips
Milk—buttermilk	Prune whip	Baked or stewed apples
Gruels, very thin soups are frequently made with vegetables, cereals, and other foods strained and served as a liquid.		Peaches
		Apricots
		Apple sauce
		Oranges
		Baked potato
Other beverages, including cocoa, malted milk, and chocolate.		Dry toast
		Sherbet and Ices
		Ice cream

Malted Milk

1 tbsp. powdered malted milk — 1 cup boiling water
Sugar (if desired)

Mix the malted milk and water, stirring well; add sugar if desired.

Meat Soup

1 lb. of lean beef, veal, or mutton — 1 large onion, chopped fine
1 qt. of cold water — 1 sprig of parsley and 1 of celery
2 Irish potatoes, diced fine — 1 level tsp. salt

Place on stove and allow to heat slowly, then boil slowly for 2 hours. Skim off all the grease. Serve either hot or chilled. Pepper may be added if desired.

Soft-Cooked Eggs

Wash one egg and put it in a small saucepan with sufficient boiling water to cover; remove to back of stove, or where the water will keep very hot but not boil; let stand seven to ten minutes, according to consistency desired. Serve in slightly heated cup.

A double boiler may be used, putting boiling water in top and bottom. Set on back of stove and cook six to seven minutes, according to consistency desired.

Care must be taken that the size of utensil is in accordance with the number of eggs to be cooked so that the cold eggs will not lower the temperature of the boiling water below 160° F.

Milk Toast

1 tbsp. butter
1 tsp. salt
¾ cup milk
1½ thick slices toasted bread

Scald the milk, melt butter, remove from fire and add salt, and pour over freshly toasted bread. Serve piping hot. Cream may be substituted for the milk.

Poached Eggs on Toast

Break a fresh egg into a pan containing boiling water sufficient to cover the egg. Let it cook slowly for 5 minutes. Lift the egg out of the water with a batter cake turner and lay it on top of a slice of hot buttered toast. Season to taste.

Toasted Bread

Bread 24 hours old is best for toast. Slice the bread ⅛ of an inch thick, trimming off all edges. Place it in a toaster, or brown quickly over a hot stove. Serve with melted butter if desired. Toast is not palatable if too hard or if cold.

Dry Toast

Use dry bread and cut in thin slices, or dry in oven and brown over the fire. Toast for an invalid should be crisp to the center of the slice.

Soft Custard

1 pt. milk
2 eggs
2 tbsp. sugar
1 tsp. vanilla extract
pinch of salt

Scald the milk, beat the eggs enough to mix, add the sugar and salt, and pour in milk slowly, stirring constantly. Cook in a double boiler over a moderate fire, stirring constantly until thickened. When done the mixture will coat a spoon, feels thick when stirred, and all foam disappears from the surface. To prevent curdling remove from the hot water at once, set in cold water to stop the cooking, and stir in flavoring. Should the mixture curdle, beat until smooth with a dover egg beater and strain.

Baked Custard

Proceed as in making soft custard, but pour the custard into baking cups and place these in a baking pan which is filled nearly as high as the cups with boiling water. Bake 20 minutes or longer, according to the size of the cups. When done a straw thrust into the custard comes out clean. If the straw is covered with milk the custard is not done. Serve hot or cold. This may be served with rich milk or whipped cream.

Scraped Steak

Secure ½ lb. round steak, cut 1 inch thick. Place on a clean board and scrape with the bowl of a tablespoon, removing only the pulp. Season this pulp with salt and make into small flat cakes, broil over the fire or in a hot pan two minutes, and serve at once on dry toast.

Buttered Carrots

If possible, choose young tender carrots, wash thoroughly, scrape, cut into small cubes, and cook until tender in a small amount of boiling salted water. Serve plain with melted butter, salt, and pepper, or mashed and seasoned. One tablespoon of butter for each cup of vegetables is adequate seasoning.

Creamed Celery

Scrape celery. Cut stalks into one-half inch pieces and cook uncovered in boiling salted water twenty to thirty minutes. Serve covered with cream sauce.

Cream Sauce

¾ cup milk
2 tbsp. butter
2 tbsp. flour
1 tsp. salt
¼ cup milk

Prepare, using any one of the accepted methods for using white sauce.

Spinach

Remove roots, pick over carefully, discarding wilted leaves, and wash thoroughly in many waters until free from sand. If the spinach is young and tender, cook without water other than that clinging to the leaves. Heat gradually and boil until tender. If it is old, a little water may be added. Cook twenty-five to thirty minutes. Drain and chop if desired; reheat, season with butter and salt; garnish with slices of hard-cooked egg.

Baked Potato

Select potatoes of uniform size, not very large, wash thoroughly, and cut off a small piece of each end in order that the steam may escape. Bake in a hot oven from forty-five to fifty minutes. When baked, break open slightly that the steam may escape, season and serve on folded napkin.

Lemon Jelly

2 tbsp. gelatine
1 cup cold water
2 cups boiling water
¾ cup sugar
½ cup lemon juice

Soak gelatine in cold water five minutes, and dissolve in boiling water. Add sugar and stir until dissolved; then add lemon juice. Strain into wet mold and chill until firm. Unmold and serve.

Orange Jelly

2 tbsp. gelatine
½ cup cold water
2 cups boiling water
1 cup sugar
1 cup orange juice
2 tbsp. lemon juice

Make same as lemon jelly.

Exercises.—A. Prepare a liquid diet.

B. Prepare a soft diet.

C. Prepare a light diet.

D. Plan a day's meal for the family which will provide for the sick person without additional preparation. Plan the breakfast, luncheon, and dinner trays.

E. James is convalescing from an illness with scarlet fever. The doctor says he may have a semi-solid diet. How will you plan, prepare, and serve a tray for his noon meal?

PROBLEM 3.—HOW SHALL WE PREPARE DIETS FOR CASES OF CONSTIPATION AND ANEMIA?

One of the chief personal disorders of the American people is that of constipation. Poor dietary practices and lack of exercise account for the prevalence of this condition. If corrective measures are to be planned, careful attention must be given the diet.

Usually, in simple constipation, the first measure recommended is the drinking of a large glass of water on arising. The diet is planned to include ample bulk in the form of raw vegetables and whole cereals, and minerals that are laxative in effect, such as are found in prunes and figs. The acid fruits and vegetables are also helpful, tomatoes and rhubarb being good examples of these. Care should be taken to exclude from the diet food that is known to be definitely constipating. Cheese and blackberries are constipating to many people. Check your dietary for one day for its anti-constipation value.

Many high-school girls find anemia a personal problem. What do you regard as symptoms of anemia?

Anemia means the loss or destruction of red blood cells; or of the hemoglobin that carries the oxygen, or both. In this disorder too little oxygen is supplied to the body because of the shortage of the oxygen carriers. As a result, the cells of the body are unable to function fully, and weakness and impaired functions of all tissues result. The disorder is manifested in the digestive system by a loss of appetite, constipation or diarrhea, and sometimes vomiting. The effect on the nervous system is marked, and serious. In the treatment the diet is the first point of attack. The food should be simple, easily assimilated, and should include foods rich in iron, such as eggs, spinach, carrots, whole-wheat bread, beans, meats, and fish. Liver has been shown to be particularly valuable and may be advantageously included in the diet daily.

What foods rich in iron have you had in your daily diet?

Sometimes people are desirous of increasing the caloric intake without materially increasing the bulk of the diet. This is frequently the desire of people who are underweight,

and whose physicians have found no organic cause for this condition.

What suggestions can you make for increasing the calorie content of this meal from 605 calories to 1000 calories by substitutions and additions that apparently do not change the menu?

Baked potato	100 calories	
1 slice roast beef	150 calories	
1 slice bread	100 calories	
Butter (1 pat)	100 calories	
Lettuce	5 calories	
Baked apple	100 calories	
Cocoa (made with water)	50 calories	
	605	1000

Exercises.—A. Prepare a diet for constipation.

B. Prepare a diet for anemia.

C. Prepare a diet of high caloric value.

D. Julia, aged thirteen, is suffering from constipation. Plan and prepare a diet which you think would be desirable for her condition.

E. The physician says that Anna has anemia and needs more iron-bearing foods in her diet. Plan and prepare a day's dietary for Anna.

Objective Test.—Can you select the word or phrase that makes the statement true?

1. The convalescent person requires a (a) regular diet, (b) special diet, (c) liquid diet.

2. As a rule the sick person has a (a) good appetite, (b) poor appetite, (c) an abnormal appetite.

3. A (a) light, (b) soft, (c) liquid diet is given during the first days of acute illness.

4. (a) Milk, (b) meat, (c) potatoes, form the basis of the liquid diet.

5. Diets for anemia should include foods high in iron such as (a) spinach, (b) rice, (c) milk, (d) candy, and (e) pickles.

6. The (a) doctor's orders, (b) the patient's wishes, (c) nurse's convenience, should be rigidly followed in planning food for the sick.

7. The home nurse should know how to prepare a diet for (a) gout, (b) diabetes, (c) constipation.

8. (a) An attractive tray, (b) a large amount of food, (c) many varieties of food, help to increase the patient's appetite.

9. A liquid diet made up of fluid given every two hours amounts to about (a) one pint, (b) four pints, (c) six pints, daily.

Additional Problems and Exercises.—1. Outline a plan of caring for the dishes used in serving food to a typhoid patient.

2. Plan and prepare a tray for a person recovering from a severe cold.

3. What is the difference between a high calorie and a low calorie diet? In what cases of illness is each used?

Books for Class Reference:

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UNIT FIVE

THE HOME MEDICINE CHEST

Introductory Studies.—1. Make a list of medicines and drugs which are always kept on hand in your home.

2. Have you ever known a person to take poison by mistake? How did the person come to do it?

3. What patent medicines, if any, are you taking frequently in your home?

4. Make a list of the illnesses which are treated in your home without the aid of a physician.

Presentation of the Unit.—Have you ever noted the contents of your family medicine chest? One small girl referred to the medicine chest in her home as "the place where we put the medicine that was left over." Can you imagine how its shelves would be stocked? Emptied bottles, bottles without labels, but still containing drugs, and capsules prescribed by the physician for forgotten ills. Such a medicine chest would be a hindrance rather than a help to the family. The purpose of the medicine chest is to aid in the maintenance and recovery of the health of members of the family. There is certain equipment and a limited supply of simple remedies that are especially helpful in this regard and they should be available in every home. Home remedies in no way take the place of physician's treatment. In many localities a physician lives at some distance and immediate aid may be needed. There are also certain minor illnesses that are common and frequent for which the physician sometimes suggests simple remedies, such as quinine, castor oil, or Epsom salts, by phone. It may be

necessary to treat a cut or a bruise, and the dressings and ointments should be available.

Care should be taken in the use of drugs that they may not become habit forming. The presence of a drug in the family medicine chest does not mean that it is a good thing to include in the daily fare of any member of the family. A drug habit, whether it be a constant dosage for constipation or the deadly morphine habit, may result in infinitely more harm to the person than would have resulted from the ailment for which the drug was first taken.

Have you ever read in the paper of a person dying from medicine taken by mistake? The frequency with which this occurs shows the need for greater care in labelling medicine and drugs, and greater caution in administering both.

PROBLEM 1.—HOW CAN MINOR ILLNESSES BE TREATED AT HOME?

Children Frequently Suffer From Earache.—Hot applications placed back and below the ear may give temporary relief. Nothing should be poured into the ear, except on the advice of a physician.

Constipation Is a Common Ill.—It is frequently said that the American people spend more for cathartics of various sorts than they do for the support of churches. Such a statement is a sad commentary upon our dietary and health practices. Although these practices are no worse than those of other countries, they are not in keeping with our leadership in health education. To keep the body in good condition the intestines should be evacuated at least once a day. Constipation results when the undigested food is not excreted. Bacteria present in the lower intestines thrive on the undigested food residue, changing some of it into

substances poisonous to the body. These poisonous substances are taken up by the blood and carried over the whole system. Perhaps you are familiar with the dull headache that results. Ordinarily this may be prevented by eating freely of fruits, vegetables, and bran, and drinking freely of water on arising in the morning and before retiring at night. Sometimes, however, constipation results from nervous tension or from lack of exercise, and even the best dietary practice does not give relief. In this case a dose of cascara sagrada, Epsom salts, or some other cathartic may be necessary to relieve the condition. An enema of mild soap suds may also be given. The temperature of the enema should be 106° to 110° F.

The general directions for giving an enema follow:

1. Protect the patient from exposure by closing doors or by use of screen.

2. Protect the bed by placing under the patient's hip a rubber sheet covered by a draw sheet or a large towel.

3. Have patient lie on the left side or on the back, with knees bent.

4. Bring bedpan and prepared enema in the irrigation can or bag of the syringe.

5. Oil the nozzle with vaseline, taking care that it does not come in contact with the contents of the vaseline jar.

6. Let the enema flow through the tube into the bedpan to expel any air held in the tube. Then shut off the flow and allow the patient to insert the nozzle. If he is unable to do this, gently insert the nozzle into the rectum.

7. Regulate the flow to a gentle, even rate by placing the irrigation can or syringe not more than 24–30 inches above the patient's head.

8. Shut off the flow before the enema is entirely taken so that no air will enter. If the patient feels a desire to expel the fluid during the giving of the enema, shut off the flow and for a moment massage the patient's abdomen gently with the hand. Then begin again, having the bag or irrigation can lowered somewhat.

9. Encourage patient to retain the enema but place the bedpan in position immediately.

Neither drugs nor enema should be resorted to habitually. The condition of constipation can be much more wisely treated through proper diet and exercise.

Relief from Headache Is Sought.—Pain is the body's danger signal. The reasonable procedure is to find the cause of the pain and relieve the disorder. Too often people take drugs to relieve the pain without finding out its cause. Headache may be caused by nervousness, fatigue, eye strain, excitement, constipation, acute indigestion, or by some infectious disease. Fresh air, rest, and quiet are valuable general aids to recovery. Frequently a hot-water bag to the feet and cold compresses to the head are helpful. Rubbing the forehead and temples with aromatic spirits of ammonia or menthol is cooling and soothing.

If it is known that the food wastes have accumulated in the intestine, relief should be sought for that condition. A high fever accompanying a headache indicates a condition that requires a physician's judgment.

Colds May Yield to Home Treatment.—Have you ever thought how much of the absence from school is caused by "common colds"? You are so well aware of all the symptoms of a cold that perhaps they need not be reviewed. The headache, the discharges from nose and throat, the chills and fever, all indicate an acute infection. If persons affected would go to bed at once, much valuable time could be saved by them and by the people whom they infect. The usual home treatment for a cold is:

(1) See that all accumulation of waste in the body is eliminated through the administering of a cathartic.

(2) Supply the body with plenty of water to maintain fluids of the body and flush out the system. This is done by giving a glass of hot water with a pinch of soda or a glass of hot lemonade every two hours.

(3) Avoid drafts or chilling.

(4) Give the body absolute rest and quiet. A hot bath aids in securing relaxation.

(5) Food should be taken advisedly. All rich and heavy foods should be avoided. Light nutritious foods, especially soups, are recommended.

(6) By isolation and guarding avenues of infection others may be spared the discomfort of the disease. (Cover all coughing and sneezing with a handkerchief.) Fresh handkerchiefs should be frequently used so as to avoid reinfecting oneself. They should then be washed separate from the family laundry and boiled. Dishes should be boiled also.

(7) Never say, "It is only a cold," and refuse to take proper care of yourself. Remember that your health and the health of others may depend on giving a cold due attention.

(8) Stay in bed for a day after the fever disappears.

Boils May Indicate Dietary Deficiency.—Boils are specifically due to the "invasion of bacteria from the outside." When the skin is broken, germs may lodge on the subcutaneous tissue and proceed to multiply. Their presence leads to an increase in the blood supply at the point concerned. If the nutrition is good, the body is able to resist the invasion and the boil fails to develop. Scientific experiments have shown that the vitamin content of yeast is a specific for the prevention of boils. The same vitamins are found in other foods but yeast is particularly rich. If the diet has been inadequate in vitamins, the section about the infected point becomes swollen, red, and hot, and the pain becomes intense. The congested area comes to a head, and ruptures usually occur through the skin. After the core comes out healing may begin.

If boils are to be avoided there are in general two factors

that must be watched. First, the diet must be kept adequate in regard to vitamins, and secondly, scrupulous personal cleanliness must be maintained.

Many People Are Sensitive to Poison Ivy.—Ivy poisoning is a spreading skin eruption caused by contact with the three-leafed creeping ivy. The sensitivity of people to this plant differs greatly. The disorder is characterized by redness, blistering, itching, and burning. Treatment consists of applying a paste of sugar of lead, or washing with a solution of copper sulphate. If the inflammation does not yield to treatment easily, it is wise to consult a physician. If one has been exposed to poison ivy, an immediate and thorough washing of the exposed skin surface with a heavy lather of laundry soap, followed by a thorough rinsing with water, will often remove the ivy poison before it penetrates into the skin.

Exercises.—A. Bertha, a freshman in Senior High School, has a cold. She is not severely ill, but feels that she should not neglect giving herself proper care. What method of home treatment can you suggest to her for this cold?

PROBLEM 2.—WHAT SHOULD BE KEPT IN THE HOME MEDICINE CHEST?

A Medicine Chest Is Desirable in Every Home.—There are certain remedies, drugs, and equipment which should be in every home. These should all be assembled together in a clean and well-protected place in order to be convenient for the use of the family. A regular cabinet may be purchased for this purpose, or a box can be easily utilized. The chest should be located out of the reach of small children and should be easily accessible to the other members of the family.

Certain Drug Supplies and Disinfectants Should Always Be Available.—The home nurse should be familiar with the use of these supplies. The drug supplies most frequently

Fig. 88. A well planned home medicine chest is desirable.
Courtesy Division of Extension, Ohio State University.

needed are boric acid solution, baking soda, salt, castor oil, Epsom salts, cascara, camphor, vaseline both plain and carbolated, zinc oxide ointment, and unguentine. In ad-

dition to these each family will include such other drugs as are required for its special needs. Certain disinfectants should be included in the home medicine chest in order to meet emergencies which frequently arise. Iodine, a two per cent solution of mercurochrome, a ten per cent solution of argyrol, a lysol solution, and at least one of the recommended commercially prepared astringents are very important. Iodine should be kept in dark glass-stoppered bottles. All poisons should be placed on a shelf by themselves and the bottles carefully labeled.

Certain Appliances Are Desirable.—The home medicine chest should be equipped with the following general supplies: One card each of large and small safety pins, one medicine dropper, one graduated medicine glass, one pair of scissors, one clinical thermometer, one hot-water bag, one fountain syringe or irrigation can, one bedpan, two or more stiff hand brushes for scrubbing the hands, roller bandages from one to two and one-half inches wide, two bent glass drinking tubes, one-fourth pound of absorbent cotton, one bar of castile soap, one spool of adhesive tape one inch wide, and one jar of sterilized gauze. An irrigation glass for the eye is also desirable. If electricity is available an electric pad is an excellent appliance to have in the home; but be sure its wiring is in perfect condition to avoid short-circuit and possible fire.

Exercises.—A. Plan a home medicine chest for your family. Estimate the cost.

B. The Allens have decided that they need a home medicine chest. There are four children in the family, two boys, nine and ten, and two girls, three and six, and they frequently need medicines, bandages, and the like. Mrs. Allen thinks that there are some standard drugs and equipment which should be kept on hand. What would you suggest for this chest? Where would you recommend that this chest be located?

PROBLEM 3.—WHAT PRECAUTIONS ARE NECESSARY IN HANDLING MEDICINE?

All medicine should be labelled and put out of the reach of children. The need of labelling medicine seems apparent, yet frequently people think it is easy to remember what medicine was put in a certain unlabelled bottle. Perhaps they merely postpone labelling; most often they neglect it. The result is a number of unlabelled boxes or bottles, useless because their contents are not known, and therefore dangerous if used. It should be an unvarying rule that every container of medicine or drugs should be distinctly labelled before it is placed on the shelf, and all unlabelled bottles should be discarded. It is most important that all medicines be placed out of the reach of children. Serious and too frequently fatal results follow the handling of medicine by children.

The Containers of Poisonous Drugs Should Be Easily Recognized.—Have you ever read of death resulting from a poisonous drug being taken by mistake? This frequently occurs, even though the bottle is carefully labelled. Colored bottles have been recommended as a type of container that might serve as a warning. Why might this not prove a protection? Accidents often occur because medicine is taken in the dark. A colored bottle would not serve as a warning to a careless person following such practice. Other precautions should be taken.

If bottles that are distinctly different in shape are used for poisons, accidents might be avoided. The suggestion has been made that a triangular shaped bottle be used, but these are not always available. In one home, stoppers of a certain kind are used on the poison-containing bottles. In another home, all bottles containing poison are brushed

with lacquer and sprinkled with sand. The label is then pasted on the bottle. The sense of touch gives warning that the bottle contains poison. What other ways of identifying these bottles can you list?

All Labels Should Be Read Three Times.—This rule is suggested as a measure of safety. If the label is read three times, the possibility of mistake due to excitement, carelessness, or poor eyesight is minimized. If you realize that all drugs are more or less undesirable, and many of them are

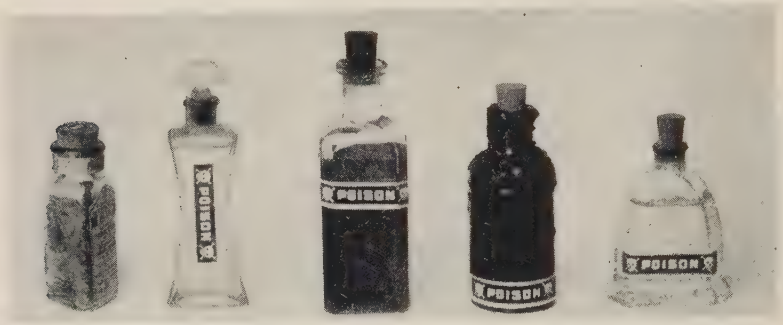


FIG. 89. Bottles that are distinctly different should be used for poisonous drugs.

highly injurious and poisonous, you understand why such precautions are urged. Reading the label three times is not too much to do as a protection from mistakes.

Directions Should Be Carefully Followed.—The three items that are most important in giving medicine are accuracy, punctuality, and efficiency. If the prescription calls for six drops, or for one teaspoon, or for two tablespoons, the patient should receive exactly the amount stated. If the dosage is to be given every hour, or every three hours, the time should be neither lengthened nor shortened. Punctuality in giving medicine is of great importance.

Frequently the value of the drug depends not only on the dosage prescribed but on the way in which it is given to the patient. Usually medicines are given with water. The water may have an important effect in the ability of the body to absorb and utilize the drug, and may be necessary to meet the stimulated demand of the body for fluids. A glass two-thirds full of cool water affords about the amount to offer the patient following a dose of medicine. The doctor's orders may stipulate that the medicine shall be given before meals, after meals, or between meals. In such cases the relation of the dosage to the meal time is important, since the effect of the drug may depend on whether there is food in the stomach or not.

The Unpleasant Taste of Certain Medicines May Be Disguised.—Have you ever been nauseated by some certain medicine? How did that affect your reaction towards further dosage with it? Since aversion to the taste of medicine may be so strong as to make its administration difficult, it becomes important that the taste should be made as unobjectionable as possible. If given in water the drug should be diluted so the taste is not so strong. Cold water should be given immediately afterwards from a clean glass. What objections are offered to disguising the taste of medicine with milk or other foods?

Ice held in the mouth before and after the dose of medicine is taken often proves helpful to the patient. The cold numbs the taste nerve-ends so they do not register the unpleasant flavor.

Castor oil is frequently prescribed and is seldom acceptably received by the patient. There are ways by which the dosage may be made more bearable. The simplest of these is by use of buttermilk. A small glass of sour buttermilk is chilled, and few chips of ice added. The dose of castor oil

is poured into the center of the glass, care being taken that it does not touch the side of the glass. When the buttermilk has surrounded the dose it is swallowed rapidly. Ice held in the mouth both before and after giving the medicine lessens possible nausea.

Some patients are averse to buttermilk, and find castor oil so treated very objectionable. Another method used in hospitals is based on the use of lemon juice. A small glass is rinsed with lemon juice so as to prevent the adhering of the oil to the glass. Two teaspoonsful of lemon juice are put in. The oil is poured in, and on top of this more lemon juice is added. A few chips of ice may be put in. The glass and its contents are carefully chilled before serving. Another method is to stir together the lemon juice and oil, and then add as much baking soda as adheres to the tip of a spoon. The soda causes the liquid to fizz. Drink while fizzing.

Exercises.—A. Practice, using water, measuring various prescribed fluid dosages, such as one teaspoon, one tablespoon, three drops, and ten drops.

B. Mr. Harris became quite ill yesterday evening and went to the medicine closet for the prescription the doctor had given for his illness. Without paying any attention he took the bottle from its place and poured a dose which he immediately started to take. Then remembering the family rule, "Look at the bottle before you take the medicine," he read the label and found that the bottle contained iodine. How could Mr. Harris avoid such a near accident in the future?

PROBLEM 4.—WHY SHOULD PERSONS WITHOUT MEDICAL TRAINING AVOID PRESCRIBING MEDICINES?

Have you ever been in a group when some one complained of feeling ill? Perhaps he had a cold, or indigestion, or a sprained ankle. How many different remedies for his specific ill did you hear given? From common experience it has

been found that there are certain reasons why medicines recommended in this way should be avoided.

The Prescription May Be Worthless.—Not infrequently a medicine is suggested which is without value. For example, at one time a small bag of asafetida worn about the neck was regarded as a cure-all and preventive of the diseases of childhood. A few drops of kerosene rubbed on the back of the neck was supposed to relieve constipation. Both these prescriptions are worthless, being entirely unrelated to the cause of the specific disease or to its clinical manifestations.

The worst feature in the use of a worthless prescription is the time lost through its use. In some cases this is of sufficient importance to determine the success or failure of proper care later. One cannot afford to lose time by using worthless prescriptions. There may be other effects following unofficial prescriptions that are more serious.

The Effect of the Prescription May Hide Important Symptoms.—Not infrequently one hears of some disease remaining unrecognized for days because the medicine administered by the family has been powerful enough to mask the manifestations of the disease. A commonplace example of this is the treatment of an eruption on the skin, accompanied by a headache and visual sensitiveness, as a "digestive rash," to be treated by cold applications, aspirin tablets, and light diet; and when the patient has become quite sick, it is found that the ailment is really measles. The treatment concealed symptoms that jeopardized the well-being of the patient and exposed others to the disease.

The Prescription May Be Dangerous.—All drugs should be handled with care, and should be prescribed only when the nature of the drug and its effect upon the body, and the nature of the illness and its effect on the body, are under-

stood. A physician spends many years in study and training to secure this knowledge. Drugs that are helpful as his tools may bring death if prescribed by an ignorant person.

Self-Dosage Should Be Avoided.—Have you ever seen a person who had many small bottles from which medicines were taken from time to time, depending on how he felt? One should avoid an attitude of mind which leads one to expect health doled out in pills or drops from bottles. Physicians today seek other means than drugs for most of their treatments. Fresh air, proper food and exercise, rest, and a happy state of mind are more conducive to health than any drugs. Reliance upon medicine too often means failure to furnish an adequate amount of these, and an abnormal interest in one's bodily reactions. Physicians seldom prescribe for themselves since it is hard to free their judgment from their personal interest. If one is not trained, the danger of self-dosages is great and should be carefully avoided.

Exercises.—A. Last winter during a severe cold spell Mr. Jones froze his feet. Since he lived in the country and was not near a physician he undertook to treat himself. His wife talked to several neighbors and each had a *pet* remedy which were all tried in turn. One suggested a mustard bath, another holding the feet in kerosene for half an hour. The result was that his feet were severely infected and were many months healing. Why is it dangerous for such untrained people to prescribe medicines and treatments?

PROBLEM 5.—WHY ARE PATENT MEDICINES A MENACE?

The next time you go into a drug store look at the shelves that range about its walls. You will find many of them filled with tooth pastes, cold creams, and other toilet accessories. But the great part of the shelf space will be given over to *patent* or proprietary medicines. Can you list some of the more common?

The wide variety of brands, and the large stock carried by the average drug store, indicate the dangers offered by patent medicines.

The American People Are Large Consumers.—The money spent for patent medicines by the people of this nation far exceeds our national expenditures for education.

FIG. 90. These three are typical "Quack Medicines" on the market. Courtesy of American Med. Assoc.

Much of this money is obtained under false pretenses. What is meant by this statement?

If you read the label on one of these bottles, you will find a list of symptoms indicating a condition which the preparation is supposed to remedy. These symptoms are usually general symptoms such as headache, backache, and tiredness, that may arise from a number of causes. Since

these symptoms do not necessarily arise from the same cause, group treatment for them is absurd, and money and health may be lost by such mistakes.

Proper Treatment May Be Delayed.—If a patient tries various *quack* medicines before seeking the advice of an able physician, time and strength may be wasted. A delay of weeks or months in consulting a physician because a certain patent medicine is being tried often has fatal results.

Such Medicines May Be Habit-Forming.—Frequently a preparation that is offered to relieve pain has for its active principle some narcotic which has dreadful possibilities as a habit-forming drug. There is grave danger of habits being established that will wreck lives through nostrums containing opium or morphine. A safe rule to follow is: *avoid the use of patent medicines.*

Exercises.—A. Read the labels on the bottles or boxes of several patent medicines. List the number of diseases each will cure. What is your opinion of such claims?

B. How much does your family spend each month for patent medicines?

C. William Jones has been ill for some time. His physician has diagnosed his disease as ulcers of the stomach. Mr. Jones will not follow the diet prescribed by the physician. He seeks to find relief in a patent medicine marked, "To relieve pain and allow sleep." He now finds his patent medicine necessary and has increased the dosage. What danger do you see in the situation? How may such cases be prevented?

Objective Test.—Which of the following statements are true? Which are false?

1. The medicine chest is the place where the medicine that was left over is kept.
2. Home remedies take the place of a physician's treatment.
3. Constipation can be wisely treated through proper diet and exercise.
4. Headache should not be treated without first finding out its cause.
5. A cold is a minor illness and any special attention is unnecessary.

6. The home medicine chest should contain boric acid, vaseline, camphor, and iodine.

7. The medicine chest should be located so that it is accessible for every member of the family.

8. All medicines should be carefully labelled.

9. Medicines should be given according to directions.

10. If one is not trained, he should not prescribe remedies for himself or others.

11. Very little money is spent for patent medicines in America.

12. Patent medicines are excellent remedies for the cure of many diseases.

13. It is well to disguise the unpleasant taste of certain medicines by giving them to the patient in milk or other foods.

14. There should be a clinical thermometer in every home.

15. An infection of boils often indicates lack of vitamin B in the diet.

Additional Problems and Exercises.—1. How much do Americans spend each year for patent medicines? How does this amount compare with the amount spent for education? Look up the facts.

2. Prepare and demonstrate the use of a croup kettle.

3. Make a poster showing the undesirability of using patent medicines.

4. What equipment for caring for the sick should be in the average home?

Books for Class Reference:

Delano, J. A. "American Red Cross Textbook on Home Hygiene and Care of the Sick." P. Blackiston's Son & Co.

Martin, Pearl. "Health for Farm Families." Extension Bulletin No. 54. Kansas State Agricultural College.

Suggested Bulletins and Leaflets for Teacher and Student:

Przyluska, Wanda. "Home Care of the Sick." Vol. 20, No. 1 Ext. Ser. Ohio State Agr. Col., Columbus, Ohio.

UNIT SIX

FIRST AID AND EMERGENCY TREATMENTS WHICH EVERYONE SHOULD KNOW

Introductory Studies.—1. List the accidents which have occurred in your family.

2. What first aid treatments were used in each case?

3. What precautions would you take before attempting to remove a splinter from a finger?

4. What are four reasons for choosing nursing for a life work?

Presentation of the Unit.—Have you ever thought of the number of accidents which occur in your home or school which require immediate treatment and attention? Some of these are serious and need the aid of a physician, but many of them can be cared for in the home if the proper treatment is understood.

Our complex manner of living has increased the number of accidents, and our knowledge of the means of infection has made us more concerned about adequate and proper procedure in cases of emergency. There are times and occasions when home treatment and first aid are very necessary and may prove a valuable help to the doctor when he comes.

Have you known of the life of a person to be saved by some one knowing the correct thing to do? Every year young men and women win medals and other honors for heroic acts in the saving of lives.

Schools, clubs, and many organizations offer instruction in first aid and emergency treatments because of the necessity of such information and knowledge. Frequently people are called upon to administer emergency treatments of various kinds. Cuts, bruises, burns, and stings are among

the common hurts. Not infrequently the stopping of a hemorrhage is a problem of the home-maker. A cool, level head and an understanding of what to do are essential in these emergencies.

PROBLEM 1.—WHAT SHOULD YOU DO IN CASE OF CERTAIN EMERGENCIES?

Drowning and Smothering Require Similar Treatment.—Both prevent the body from receiving oxygen and from throwing off the breathed air. In each case the person stops breathing, and becomes unconscious. Artificial respiration will frequently start the breathing process and bring consciousness to the individual. There are several methods of artificial respiration, but the one recommended by the American Red Cross is as follows:

1. Lay the patient on his belly, one arm extended directly overhead, the other arm bent at elbow and with the face turned outward and resting on hand or forearm, so that the nose and mouth are free for breathing.

2. Kneel straddling the patient's thighs with your knees placed at such a distance from the hip bones as will allow you to assume the position shown in Fig. 91.

Place the palms of the hands on the small of the back with fingers resting on the ribs, the little finger just touching the lowest rib, with the thumb and fingers in a natural position, and the tips of the fingers just out of sight. (See Fig. 91.)

3. With arms held straight, swing forward slowly, so that the weight of your body is gradually brought to bear upon the patient. The shoulder should be directly over the heel of the hand at the end of the forward swing. (See Fig. 92.) Do not bend your elbows. This operation should take about two seconds.

FIG. 91. Artificial respiration (prone or Shäfer method), showing inspiration. (Eastin)
Courtesy of *Hygeia*.

4. Now immediately swing backward, so as to remove the pressure completely.

5. After two seconds, swing forward again. Thus repeat deliberately twelve to fifteen times a minute the double movement of compression and release, a complete respiration in four or five seconds.

6. Continue artificial respiration without interruption until natural breathing is restored, if necessary, four hours or longer, or until a physician declares the patient is dead.

7. As soon as this artificial respiration has been started and while it is being continued, an assistant should loosen any tight clothing about the patient's neck, chest, or waist. Keep the patient warm. Do not give any liquids whatever by mouth until the patient is fully conscious.

8. To avoid strain on the heart when the patient revives, he should be kept lying down and not allowed to stand or sit up. If the doctor has not arrived by the time the patient has revived, he should be given some stimulant, such as one teaspoonful of aromatic spirits of ammonia in a small glass of water or a hot drink of coffee or tea, etc. The patient should be kept warm.

In cases of electric shock where unconsciousness has resulted, this same method of artificial respiration is used very often with successful results. In all cases of drowning or smothering, a physician should be called at once and artificial respiration should be carried on until his arrival and change of orders.

Burns and Scalds Require Immediate Attention.—They are very painful and quite serious, especially when a large portion of the body is involved. A burn is caused by dry heat and a scald is caused by moist heat. Burns and scalds are classed according to their depth and are called first, second, and third degree. In the first, the outer layer

FIG. 92. Artificial respiration (prone or Shaefer method). Expiration.

Courtesy of *Hygeia*.

of skin only is involved, and the injury is indicated by its turning red; in the second, there is a deeper burn, and the injury is indicated by the raising of a blister; in the third, the tissue under the skin is destroyed. As a rule, the amount of surface injured, rather than the depth, determines the seriousness of the burn. If two-thirds of the skin is destroyed, the patient's chance for recovery is very small.

Exposure to the air increases the pain in burns and scalds. Soda may be dusted on the surface. Cotton should never be placed next to the wound. In cases of blisters, a sterile oil should be used. Equal parts of limewater and sweet oil, or limewater and linseed oil, are excellent for this treatment. There is always danger of infection in cases of burns, and extreme caution should be used in caring for them. Only clean, sterile bandages and sterile oils and ointment should be used.

Injuries Due to Extreme Cold Must Have Special Care.—Such injuries are frost-bitten and frozen tissues. The ears, feet, and fingers are the parts of the body which are most frequently affected. If these cases are not properly cared for, serious results may follow.

In cases of frost-bite and frozen tissue, the affected part should be gradually brought back to normal temperature. Snow or cold water is used at first, with a gradual increase in the temperature of the water used. If the accident is severe, medical attention should be sought, for in extreme cases tissue is destroyed and the danger of infection is great.

Foreign Bodies in the Eye and Ear Require Careful Treatment.—Any injury to the eye should receive immediate attention. The eye is such a delicate organ that any chance of infection should be avoided. Frequently foreign particles such as cinders, dust, or insects get into the eye and cause much pain. In such cases the eye should never be

rubbed, but should be closed. Frequently the tears are able to carry off the foreign particle.

If you wish to remove an object from the eye of another person, seat him in a good light. Have him look up and then pull down his lower eyelid. If the particle cannot be seen, turn the upper lid up over a match and have him look down. If the object is visible, it can easily be moved with sterile cotton wound round a toothpick or a piece of sterile gauze. After the removal of the particle, a drop of argyrol or boric acid solution should be dropped into the eye to prevent danger of infection. A warm or cold wet cloth applied to the eye will do much to relieve the inflammation. If the particle is embedded, the aid of a physician should be sought.

Often children put beans, buttons, or corn in their ears, and sometimes insects enter the ear. The insects may be removed by dropping a few drops of warm sweet oil in the ear, or by holding an electric light close to the ear. But the services of a physician are necessary for the removal of other objects. The ear should never be poked, as this may result in pushing the object farther in and permanently injuring the ear-drum.

In Case of Hemorrhage Pressure Should Be Applied.—Hemorrhage is caused by loss of blood from an artery, vein, or capillary. The blood from the artery is a bright red and comes in spurts; the blood from a vein is a darker red and comes in a steady flow.

The treatment consists in checking this flow and the accompanying loss of blood. Pressure, elevation, heat or cold, and certain chemicals are useful in stopping hemorrhage. If the bleeding is due to a cut artery, pressure should be applied to the artery between the wound and the heart; if it is due to a cut vein the pressure is applied below

the cut so that the cut is between the pressure and the heart. Can you explain the reason for this difference in treatment?

If the cut is such that pressure can be applied readily, as in the case of a cut limb or arm, the application can be made by tying a handkerchief or piece of muslin around the limb with the knot over the artery or vein. A stick should then be inserted in the knot and the bandage thus made twisted until the bleeding has stopped. This type of bandage is sometimes called a tourniquet. It will be necessary to loosen the bandage frequently to determine if the bleeding has stopped. Some authorities say it should be loosened as often as every 30 minutes.

Nosebleed is another common form of hemorrhage, and is called a capillary hemorrhage. The object of the treatment in this case is to obtain a clotting of the blood. Ice or cold compresses should be applied to the back of the neck, forehead, or nose. A hot foot-bath will sometimes check the flow of blood, while in certain instances the use of astringents is necessary. In case of severe hemorrhage, a doctor should be summoned at once.

Cuts and Scratches Should Be Cared For Promptly.—Although cuts and scratches may seem to be very minor injuries, they may become serious if not given proper care. They prove excellent sources of infection, and not infrequently cause death. If possible, a cut or scratch should be allowed to bleed. It should be carefully washed in water which has been boiled, or in a boric acid solution, and then painted with a two per cent solution of mercurochrome. It should be wrapped in sterile gauze and given careful attention until it is completely healed. If the wound is very deep or does not yield at once to home treatment, a physician should be consulted.

Sprains and Bruises Occur Frequently.—They are caused by injury to muscle tissue and are often accompanied by intense pain and discoloration, and swelling of the tissues. Cold applications should be used in treating sprains and bruises. Cloths wrung out of cold water afford a desirable means of applying cold to the injured tissues. Have you ever had a sprained ankle? How was it treated? A successful nurse suggests the best rule. It is, "Apply an ankle bandage and then use the ankle."

Poison Requires Prompt Medical Aid.—Occasionally, through mistake or carelessness, some member of the family becomes a victim of poison. Each poison presents its own symptoms, and an effort should be made to determine which poison is the cause. In case of no specific information, a general procedure for all poisons may be followed. Milk, white of egg, or strong tea may be given. Then vomiting should be induced, either by running the finger down the throat or by giving repeated doses of mustard or salt water.

Each bottle containing poison should be so labeled and should have printed on it the antidote. When the definite poison is known, the correct method of procedure is then possible. In all cases of poisoning, a doctor should be called at once.

Exercises.—A. Mary Jones, while playing in the chicken yard, stepped on a nail which ran into her foot half an inch or more. Her mother called the doctor but he was out on a call and could not be located. What procedure should her mother follow in treating this accident?

PROBLEM 2.—WHAT KIND OF BANDAGES MAY THE HOME NURSE NEED TO USE?

The need for bandaging comes so frequently in the home that knowledge and practice in the use of the most common bandages is very essential. They are used for support, to

apply pressure, and to hold dressings, splints, and applications in place. Have you ever heard a person say, "I cannot put on a bandage so that it will stay?" Cuts, scratches, and wounds of all types require bandages, and sprains and bruises are sometimes aided by their use. It is important that we know how to keep bandages in place by proper application.

All bandages should be sterile and for this reason, commercially prepared sterilized ones are the best. Only sterile cloth should be used next to a cut or scratched tissue.

The following method of procedure for bandaging is given by Miss Pearl Martin in her bulletin, *Health for Farm Families:*

1. The patient should be placed in a comfortable position before applying bandages.

2. The attendant should stand opposite the part to be bandaged.

3. The attendant should bandage away from himself and should avoid making turns or knots over any bony prominence.

4. The bandage should be free from ravelings or selvage. The selvage does not stretch, and thus interferes with getting a uniform pressure.

5. To roll a bandage by hand, start it by grasping the side edges of the end of the material between the thumbs and index fingers, twirling it about until a firm roll is formed; then hold the roll in one hand between the thumb and index finger of the opposite hand as it rotates the bandage.

6. In case of a burn, wound, or inflammation, the bandage should be applied loosely.

7. When bandaging a limb, allow the fingers or toes to remain exposed. If a bandage is too tight, the nails will

discolor or the skin will become cold; therefore, observe the condition of the nails and skin of a bandaged limb.

8. A hemorrhage from the arm or leg must be controlled by a tight bandage. This bandage is called a tourniquet, and should not be left in place longer than thirty minutes without loosening the tourniquet for a few seconds to relieve the pressure, as gangrene may result.

The Handkerchief Bandage Is Commonly Employed.—It is used on the arm, head, hand, and foot. It is made by folding a large handkerchief, piece of muslin, or other firm material (about twenty-four or thirty-five inches square) diagonally, or the material may be cut diagonally. The result is a triangle. (Fig. 93.) For the foot and hand use a twenty-four-inch square and fold diagonally.

The Four-Tail Bandage Is Easily Applied.—It is usually five to eight inches wide, and two to three feet long. Using a piece of material of the size given, fold crosswise and crease for the center; then fold lengthwise and tear fourteen inches from either end toward the center, thus leaving at least eight inches of untorn material in the center. (Fig. 94A.)

This bandage is used advantageously in holding hot and cold applications in place. When used on the head, the middle of the bandage is placed on the top of the head, the two front ends are carried back and tied at the back of the neck, and the two rear ends are carried forward and tied under the chin. (Fig. 94B.)

Roller Bandages Are Often Used in the Home.—They are used on the legs, arms, head, eyes, fingers, or ribs. There are two types: the simple spiral and the reverse spiral.

The simple spiral is applied by rolling the bandage obliquely around the member, each turn covering two-thirds of the turn beneath. (Fig. 95A.)

When the shape of the member will not allow the simple spiral to stay in place a reverse spiral is used. (Fig. 95B.)

Fig. 93. The handkerchief bandage is an easy one to apply.
Courtesy of Division of Extension Kansas State Agricultural College.

Application of the reverse spiral differs from that of the simple spiral in that at each round of the bandage a sharp

turn or fold is made in the width of the bandage as though it were going to be cut on the bias. This gives the bandage elasticity and enables it to fit more closely.

FIG. 94. The four-tailed bandage is useful in holding hot or cold applications in place. Courtesy Division Extension Kansas State Agricultural College.

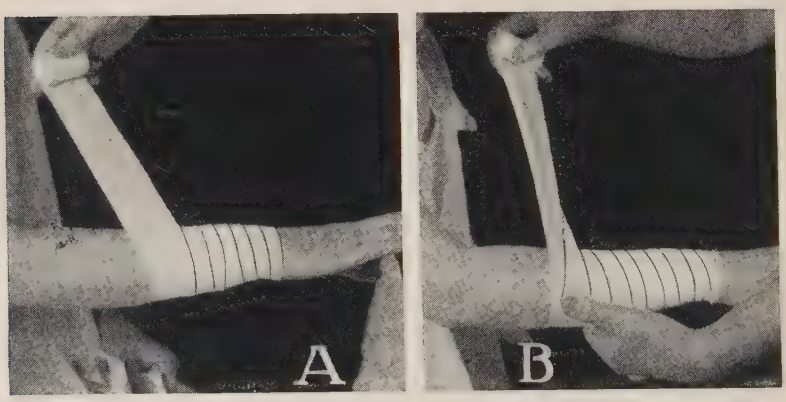


FIG. 95. The spiral bandage either single (A) or reversed (B) is commonly used.

To make the reverse spiral, place the thumb of the left hand on the lower edge of the bandage; slacken the bandage for about three inches between the hands; turn the roller

one-half toward you; then pass the roller under the limb; keep the lower edge of the bandage parallel with that of the turn before; and the reverse spiral should lie at the center of the limb or at its outer side.

Adhesive Tape Bandages Are Important.—They may be obtained at the drug store in various widths and lengths. Adhesive bandages are useful in holding dressings in place,

FIG. 96. The use of a sling often proves helpful in case of broken bones, sprains and burns. Courtesy of Division of Extension Kansas State Agricultural College.

and for strapping muscles, ribs, broken arms, and sprains. It is unwise to apply adhesive tape directly over a wound because of the danger of infection. Removal of these bandages must be very carefully done or it is painful; by applying a little benzene on the back of the adhesive it can be readily removed, but there must be no open flame in the room, as benzene is explosive.

Exercises. A. Demonstrate the application of the following bandages: simple spiral, handkerchief, and four-tail.

B. Ethel has a sore arm which needs to be carefully bandaged until the arm is healed. She lives in the country and her mother or sister must put a fresh dressing on daily. What bandage is the best one to use? How shall her mother and sister proceed in bandaging her arm properly?

PROBLEM 3.—WHAT OPPORTUNITIES ARE THERE IN THE NURSING PROFESSION?

Have you ever passed a visiting nurse, or a school nurse on her busy way, and wondered where she was going and what she was doing? Perhaps you have observed more closely a graduate nurse in a hospital who has labored that you or some member of your family might regain strength and health. From such observations you can learn something of the profession of nursing, but not all.

Nursing Is a Recognized Profession.—The nurse, like the doctor, cares for the sick, helps prevent disease, and works to preserve health. Every individual who has medical or hospital care, every social agency which works for the prevention of disease and the preservation of health, accepts service from her. The nurse serves not only the sick in the home, the hospital, the dental offices, but the healthy people in the schools, the people in clinics, the babies in "well baby clinics," and other people through many channels.

Nursing Has No Geographical Limits.—We find nurses in Hong Kong, Paris, the Philippines, and New York City, as well as in the tiny rural villages of our country. They are engaged in hospital service, in school nursing, in child welfare, in county nursing, and in industrial nursing. Everywhere people are in search of health. Everywhere nurses are needed.

The Standards of Training and Morals Are High.—At the present time in America nurses have opportunities for

training that are unequalled anywhere. There are, in general, two types of nursing schools, both of which are open to the high-school graduate. In the first, after a period of two or three years of satisfactory work the students are graduated with recognition of hospital and course work completed, and are accorded the privilege of taking an examination for registration. The second type of school is also open to high-school graduates. Here, however, the course is offered as a regular university or college curriculum leading to the degree of Bachelor of Science in nursing. Some-

I SOLEMNLY pledge myself before God and in the presence of this assembly to pass my life in purity and to practice my profession faithfully. I will abstain from whatever is deleterious and mischievous, and will not take or knowingly administer any harmful drug. I will do all in my power to elevate the standard of my profession, and will hold in confidence all personal matters committed to my keeping, and all family affairs coming to my knowledge in the practice of my calling. With loyalty will I endeavor to aid the physician in his work and devote myself to the welfare of those committed to my care.

FIG. 97. The nurse's pledge.

times the work is combined with Home Economics courses and the degree conferred is that of Bachelor of Science in Home Economics and Nursing. Such a curriculum usually requires five years' time: three spent in the college and two in the hospital. By pursuing such a nursing course the student receives not only technical training, but an excellent background of science and understanding of life itself.

Many Types of Positions Are Open to the Graduate Nurse.—The graduate nurse has a wide choice of positions within the nursing field. She may become a surgical nurse

and share in the operations through which people strive to regain health. She may become an obstetrical nurse and lend aid to mothers awaiting the birth of babies. She may be interested in Child Welfare and Baby Clinics and spend her time and energy in this field. Many become school nurses, working through the schools with the children; others become county or rural nurses. A great field of service is found in the Red Cross in its relief work, and with the Government in its care of tubercular patients.

Fig. 98. Florence Nightingale has long been held as an ideal of the nursing profession. Courtesy of *Western Hospital.*

There Is Satisfactory Recompense in Salary and Service.—The woman who enters nursing as a profession finds a well-established salary scale. Her services are valuable and are recognized as worthy in the recompense given. In the various organized services, payment is usually made by the month. On private-case duty, payment is made by the week.

Of more permanent satisfaction than can be given by salary, even though it be good, is the realization of the fullness of development which the profession offers to those who enter it. There is no profession that brings its members nearer the inner life of people. Day by day the demand is made upon the nurse for sympathy, kindness, unselfishness, and reassur-

ance. She serves mankind from the "cradle to the grave," and many individuals turn to her for interpretation of the great events in their lives. To relieve suffering, to lighten sorrow, to impart courage for the journey back to health, or on to life's end; these are some of the ways by which the nurse serves the world.

Exercises.—A. Louise thinks that she would like to be a nurse but she wishes to know more about the profession and its opportunities. What information concerning the nursing can you give to her that will enable her to know whether or not to choose this line of work?

B. Write an account of the life of Edith Cavell.

Objective Test.—These questions are to be answered in one word, a phrase, or a short statement. See if you can do this.

1. What are four common hurts that are treated in the home?
2. What is the greatest danger in the treatment of burns and scalds?
3. How should frost-bite be treated?
4. Why should the patient's head be lowered after fainting?
5. What are four uses of the roller bandage?
6. How can nosebleed be stopped?
7. Why are cold applications used on sprains and bruises?
8. What procedure should be followed when some one is poisoned?
9. Why should adhesive tape not be used directly over a wound?
10. What are four opportunities in the nursing profession?
11. What qualities are necessary for a good nurse?
12. What are some ways in which the nurse serves the world?

Additional Problems and Exercises.

1. Write a theme on the life of Florence Nightingale.
2. Give a first aid demonstration at assembly.
3. Find out the principal Schools of Nursing in your State.

Books for Class Reference:

Delano, J. A. "American Red Cross Textbook on Home Hygiene and Care of the Sick." P. Blackiston's Son.
Harrison, E. "Textbook of Home Nursing." Macmillan Co.
Pieper, C. J. and Beauchamp, W. L. "Everyday Problems in Science." Scott, Foresman, Co.
Williams, J. F. "Healthful Living." Macmillan Co.

Suggested Bulletins and Leaflets for Teacher and Student:

"Safety for the Household." Bureau of Standards Circular No. 75, U. S. Bur. of Stand., Washington, D. C.

Home Projects.—1. Care for your home refrigerator for six weeks. Outline the methods used.

2. Care for your home toilet for a six-weeks' period. Explain the methods used and give the reasons for their use.

3. If an illness occurs in your family, keep a record of the patient for the physician.

4. Care for the making of the beds at home for a given period, using the hospital method.

5. If there is an ill member in your family, assume responsibility for one or more of his meals for a given time.

6. Plan and prepare for a given time food for an underweight child and help encourage him to eat it. Note the results as indicated by his weight record.

7. Care for a convalescent for a given period of time.

8. Assume the responsibility for the daily care of the sick room.

9. Give first aid on the school playground for a given period of time.

10. Plan and keep a daily program of exercise for a given period of time.

11. Keep your health record for a semester.

Additional Books for the Teacher:

Broadhurst, J. "How We Resist Disease." J. B. Lippincott Co.
Dakin, F. "Simplified Nursing." J. B. Lippincott Co.
Dept. of Food Economics & Nutrition, Kan. State Agr. Col., "Practical Cookery."
Martin, Pearl. "Health for Farm Families." Extension Bul. No. 54, Kan. State Agr. Col.
Pope, A. E. "Simple Nursing Procedure for High School." G. P. Putnam's Sons.
Rose, Mary Swartz. "Feeding the Family." The Macmillan Co.
Williams, J. F. "Personal Hygiene Applied." W. B. Saunders Co.

SECTION III—CHILD CARE AND DEVELOPMENT

SECTION III—CHILD CARE AND DEVELOPMENT

UNIT ONE

HOW HEREDITY AND ENVIRONMENT INFLUENCE THE CHILD

Introductory Studies.—1. In what ways do you resemble each of your parents? Your grandparents?

2. List family likenesses that you observe in your own family group or some other group.

3. Trace your own ancestry on both sides as far back as you can.

4. Cite four cases illustrating the effect of environment on animals.

5. What do you consider the four most important factors of a good environment for a person?

Presentation of the Unit.—Have you ever heard some one say of a playmate, "He has the Jones' nose," or "She has the Burns' hands"? Such comments are made frequently. These statements indicate that there are characteristics which reappear in generation after generation of a family. The continuance of these characteristics is due to heredity.

Heredity is the term used to denote this resemblance, which is based on ancestry and occurs in successive generations. Sometimes it is called our blood heritage or inheritance, to distinguish it from the inheritance of personal property and real estate, and from social inheritance.

Each person has two parents, four grandparents, eight great-grandparents and so on back until the number of his ancestors becomes very great. David Starr Jordon, using this ratio, counted back 30 generations to the Norman conquest of England which occurred in 1066 A.D. and computed that the child of today would have an ancestry of 8,598,094,592 persons. History tells us that the population of England

at that time was a far smaller number. This shows that two parents probably have many ancestors in common. Dr. Guyer says, "The family tree becomes a family net."

Fig. 99. Two guinea pigs, each showing different inherited traits.

We are all born with certain innate characteristics or traits which scientists know are inherited or passed on to us through determiners in the germ cell. We do not inherit

our characteristics from like characteristics in our parents' bodies, but since we and they are both products of the same line of germ-plasm, these characteristics reappear.

The scientists have learned that our blood inheritance is in accordance with definite, known laws. Theoretically, if they know the characteristics of your ancestors they can tell you many of the characteristics of your family members. Color of eyes, curly or straight hair, stature, and mental ability are some of these known inherited qualities.

People sometimes think that characteristics or traits which they acquire after birth are passed on to their descendants, but so far scientists have no evidence to prove this. The Chinese people who bound the feet of girl babies for centuries failed to produce a race of women born with deformed feet. A parent who through accident loses his hearing does not pass on deafness to his descendants, but a parent who is born deaf through an inherited defect may pass on this trait to succeeding generations. Scientists are studying constantly the laws of inheritance by means of the lower animals which reproduce themselves so rapidly that many generations can be observed in the lifetime of one scientist.

Inherited characteristics are both mental and physical. What characteristics would you list as mental? What characteristics would you list as physical? It is much easier for the scientist to study the physical characteristics because they are less difficult to measure. There is, however, definite proof that intelligence, feeble-mindedness, musical ability, and a tendency to nervous instability follow the laws of inheritance just as do the physical traits of color of hair and eyes, complexion, color-blindness, and stature.

Important as our heredity is, we cannot depend upon this for our success in life. Some people rely too largely on what

their family has been. Pride in family is a valuable trait but it may blind one to the power of other forces. If two acorns from the same tree were planted, one in a fertile valley and one on an arid rocky mountainside, doubtless there would be a great difference in the trees produced, even though they came from the same sturdy oak. This difference would be due to environment. The term environment in-

Charles II of Spain

Alfonso, Present King of Spain

FIG. 100. The famous Hapsburg jaw, which after many generations and much crossing with other lines, still appears in the royal family of Spain. Courtesy Underwood & Underwood.

cludes all that surrounds and influences the individual during his lifetime.

For many years people have debated the question as to whether heredity or environment is the more important force in the life of a person. It is more essential for us to realize the great part that both heredity and environment play in our lives than to be able to answer decisively this question, which is still being investigated by scientists.

Our own heredity cannot be changed, but we can control to some extent the heredity of our children. How can this be done?

You are familiar with the care the manager of a fine stock-farm takes to secure prize animals. He produces the desired qualities in these animals by careful choice of the parents. If human beings chose their mates with the desired qualities of their children-to-be in mind, the race of man might be greatly changed. Such race improvement is a dream of eugenicists. Why is it difficult to make progress in that direction? Have you ever known a young man to be greatly infatuated with a girl? Was he able to see all her personality traits clearly? How did his opinion of her differ from that of her father or brother? The familiar quotation, "Love is blind," states concisely a deep truth. When a strong emotional attachment is established for an individual, it is almost impossible to view that person in a calm, reasoning way; it is too late to evaluate the personal traits which may be important to the children of this family-to-be. Since, to most couples, a strong attraction precedes any thought of mating, the dream of the eugenicists remains unrealized. If one could form unbiased opinions first of one's acquaintances, which could guide one's emotional reactions, it would be helpful. Someone has phrased a rule, "Never accept as a friend a member of the other sex whom you would be ashamed to marry."

If by wise planning or by chance a good heredity has been secured for our children, it is necessary for us to keep our bodies in a good state of health and free from disease, to provide them with a good start in life. Although definite proof of the effects of alcoholism on the children of parents addicted to its use has not been established, evidence points to the fact that physical and mental defects are greater in

such families. The injurious effects of social disease are known to be responsible for many of the mental and physical defectives who burden society today. Syphilis and gonorrhea are such diseases. The term *social* suggests the fact that the disease not only throws a weight of woe and disaster upon society, but also that it is usually spread by an individual who fails to adjust himself to the standards held by society. Through the careless and continued evil life of this person, the disease may spread to many other people; but usually the individual's own family suffers first and most sorely. The Biblical statement that the sins of the fathers are visited upon the children even unto the third and fourth generations is particularly applicable to the effects of social diseases.

PROBLEM 1.—HOW CAN OUR INHERITED CHARACTERISTICS BE MODIFIED?

Our Ancestry Determines Our Heritage of Characteristics.—How many different races are there in your community? How can you decide to what race a person belongs? The members of each race have certain definite characteristics. The color of the skin, the texture of the hair, and the shape of the eyes are examples of physical racial traits which are the heritage of all the children of that race.

In any given race there are many variations. For example, the American Indians are known as the Red Men. There is a distinct difference in the features of these red men and those of the white men. However, separate tribes of the Indians have their own characteristic features. There is the tall, lithe Indian, supple and agile, and the short, heavy Indian, deliberate and slow of movement. In each case, the ancestry of the person determined both his racial and tribal characteristics. If in any tribe there were a family whose

members were harelipped, there might be shown, in addition to racial and tribal characteristics, the harelip inherited from the family.

The family inheritance is rarely a handicap, as the harelip would be. The color of the hair and eyes, the stature, the length of the fingers, the quality of the voice, as well as definite mental traits, all may manifest the family heritage. These characteristics cannot be traded for others. It then becomes the problem of the individual to understand fully his inheritance.

Certain Inherited Characteristics May Be Modified.—Which of your inherited characteristics do you think can be made somewhat different? Which of them cannot? A child may be born with determiners for large stature or great strength and be given such inadequate food that he never reaches physically what his heritage would have made possible. Another child may have the gift of musical ability, but if he is given no opportunity to study, he will not be a musician. A girl may have a quick temper and a sharp tongue, but through self-control may acquire an even disposition. On the other hand, she may encourage this undesirable trait in its development until she becomes a veritable shrew.

While many of our characteristics cannot be modified or changed, there are a great number which may be influenced and developed for good or bad, according to our desires. This fact has been expressed by the statement that we are the stage-coaches in which our ancestors ride. While we cannot say who may ride, we can say who will handle the whip. What does this mean?

We do not yet know the strength of the environment in modifying our inheritance, but observation and studies indicate it is great. It appears that there is only a limited

group of individuals who are not capable of some improvement through the proper kind of environment. An environment may furnish unhealthful living conditions and thereby contribute to the ill health of the individual, or an environment may supply desirable living conditions which secure the greatest growth possible. Two brothers with supposedly the same heredity were left motherless at an early age. They were brought up in homes of distinctly different types. One was reared in a home of culture and was given a college education. The other was reared in a home of ignorance, and of low ideals and standards. The one became a prominent, influential citizen in his community; the other has been a social liability who has violated the law and has served sentences in jail. Physically the two men are alike; their mental ability is similar. Apparently, the inheritance of these two men was equal. The difference in their success in life, it would seem, was due to environment.

Modifications May Come Through Conscious Effort.—Fortunately, heredity and environment do not comprise the whole story. The individual has definite power over his own life. By obeying the laws of health and keeping himself free from disease, he is best able to direct his efforts towards the modifications of the forces of heredity and environment.

Undesirable traits may be changed if an earnest effort is made to control them. Jealousy, fault-finding, and untruthfulness are examples of undesirable traits that may be modified. Poor physique, faulty muscular coördination, and poor nervous control are physical traits that may be modified. The world furnishes us with many illustrious examples of persons handicapped by serious defects who have been able to overcome these hindrances through continual

Fig. 101 Helen Keller. Courtesy of Doubleday Doran Co.

conscious effort. Theodore Roosevelt, Helen Keller, and Annette Kellerman illustrate victorious effort in this regard.

Desirable Traits Should Be Developed.—What traits do you consider desirable in individuals? Which ones are easily developed? The child who inherits a vivid imagination may through the development of this mental trait find his life indescribably enriched. A lively curiosity, if encour-

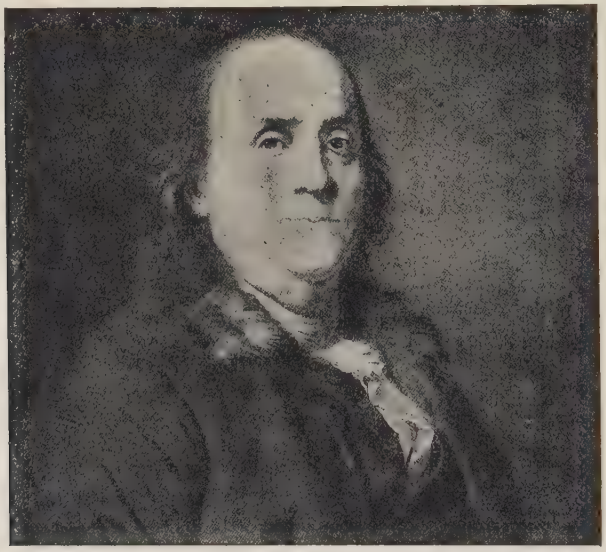


Fig. 102. Benjamin Franklin.

aged, may lead to fruitful scientific research. A strong memory, well trained, may be a valuable tool to its possessor. The development of desirable traits comes only through determined effort.

What are the necessary steps that lead to the development of desirable traits? The following have been suggested: first, recognize the trait as one you need to possess; second, create within yourself a desire for this trait; third,

plan the method of developing this trait; fourth, practice your plan diligently. A plan similar to this was used many years ago by Benjamin Franklin to secure the development of character traits that he desired. If you have read his life, you will recall his plan. What part might this self-discipline have played in his success as a diplomat? Some people are reluctant to make a definite effort to develop their inherited traits, being satisfied with themselves as they are. What danger is there in this? Careless and slipshod treatment of one's heritage may lead to its loss.

Exercises.—A. Make a list of your characteristics which are like your mother's; which are like your father's.

B. Which of your character traits do you wish to develop? Which do you wish to modify?

C. May is not a popular girl. She has a quick temper and a sharp tongue, and tells people what she thinks of them. However, she is eager to have the girls like her. What can May do to be more popular and better liked by her classmates and other acquaintances?

PROBLEM 2.—HOW DOES ENVIRONMENT INFLUENCE THE CHILD'S DEVELOPMENT?

The impulse for growth is born with the child. Scientists have studied this subject and have furnished us with information concerning the rapidity with which normal growth proceeds. Frequently you see children who are underweight and lack strength and vigor, in whom growth, though evident, is not proceeding at the normal rate. They remind you of plants springing from a seed injured by cold or parasites, or struggling to secure food from poor soil.

Some Environmental Factors May Affect the Child before Birth.—Environment reaches back farther than birth. All that an individual possesses at birth is not due to heredity. From the time the child is conceived and its life is begun and until it is born, its environment is the mother's

body. Its well-being is determined by those forces that affect its environment. The influences which affect the child during the period of growth in the mother's body are called prenatal influences.

Have you ever heard people remark about a certain child being "marked"? What did they mean by such a statement? Many uninformed people still believe that an unborn child may be marked by something which the mother has seen or experienced during the period of pregnancy. Certain blemishes or marks may appear on an individual, but they are not there because the mother has seen a mouse or eaten a raspberry. All scientific investigation indicates that such a reaction as this is impossible and that the *marking* of unborn children is pure myth.

FIG. 103. One of the twins drank milk and the other did not. Which is which?

There are, however, prenatal influences which do affect the unborn child. Any ill effect which reaches the child by absorption from the blood of the mother may be serious. Ill health, malnutrition, and venereal or social disease on the part of the mother will have a direct effect upon the child. Poisons such as alcohol, lead, or mercury taken by the mother may poison the developing child. Good health habits, sufficient rest and recreation, and an opportunity for mental pleasure and relaxation should be

possible for every expectant mother in order that her child may have a good prenatal environment.

FIG. 104. "Showing the effect of a diet lacking the B Vitamine. After three months on a deficient diet, the rat above weighed only two and one-half ounces, while his full brother below, which had received the B Vitamine, weighed five ounces." From *Nutrition of Mother and Child* by C. U. Moore.

The influence of environment becomes more evident and complex after the child is born into the world. Then the problems of feeding, clothing, and housing him vie with the problems of providing for his mental and social growth.

Consideration of these problems will be given in Units II, III, and IV of this Section.

The Environment Should Be Helpful.—The environment desired brings out the best in the individual and helps him to make the most of his heritage. A good environment makes possible mental and physical health, good morals and standards of conduct, and opportunity for well-rounded growth.

Any environment which makes for ill health, low morals, bad conduct, and illness is vicious. Have you ever thought of good environment as having a definite relationship to the social standing of the family? This is not necessarily the case. The quality of an environment cannot be measured in terms of wealth or poverty, but by its effect on the lives of individuals. This quotation from J. G. Holland expresses well the importance of environment in the child's development:

"In the homes of America are born the children of America, and from them go out into American life, American men and women. They go out with the stamp of these homes upon them, and only as these homes are what they should be will the children be what they should be."

Exercises.—A. Elizabeth, aged ten, has very poor teeth. She drinks milk and eats vegetables regularly. The physician and dentist say the condition of her teeth is due to prenatal *influence*. What do they mean by this? How is this possible?

B. Otto, aged twelve, lives on a farm with his father. His mother is dead and his father frequently has groups of men at his home at night. These men gamble, smoke, drink, and swear. It has been necessary for Otto to be punished at school for his swearing and bad talk. What has probably caused Otto to do this? How can this condition be remedied?

PROBLEM 3.—WHAT DOES A GOOD ENVIRONMENT PROVIDE?

Good, Adequate Food Must Be Provided.—Have you ever looked out over a wheat field, waving in the sunlight, and observed that in certain sections of the field the grain seemed sparse and stunted, contrasting sharply with the luxuriant growth of the rest? If you were to ask the farmer why there was such a difference in his field, what would he say? He would probably say that the sparse, stunted growth was due to stretches of poor soil that did not supply the seed with the food it needed for growth. A good environment provides wholesome and sufficient food. This is as essential for the child as it is for the seed. It is one of the first requirements for a healthy body.

Often we think of poor food supply as being the result of a low income. Above the poverty level, this relationship is not constant. The home-maker with limited funds may provide ample, plain, wholesome food for the growth of her children. Either the home-maker of wealth or the home-maker with small funds may provide unsuitable food.

Do you know children who are under weight? Is it because their environment does not furnish sufficient food? Is it because they do not have wholesome food? What precautions may we take to secure a good environment for children as far as food is concerned?

Sleep, Rest, and Recreation Are Needed.—Why do people need sleep and rest? Do you know of any persons who do not have sufficient opportunity for these? When children are overtired, their bodies do not function properly and they are apt to become nervous, lose weight, and later become ill. Studies made with pre-school children in several nursery schools indicate that the health of children is much

better if they are given a rest period before eating their meals.

Children need more sleep and rest than adults. During the first six months of his life, the baby sleeps from twenty to twenty-two hours out of the day; during the second half of the first year, he sleeps sixteen to eighteen hours; during the second year, fifteen hours; and during the third and fourth years, thirteen to fourteen hours are sufficient. Have you ever heard a mother say, "Mary won't go to sleep," or "I can't make James take a rest"? What are the dangers of such an attitude on the part of the mother?

Sometimes the child's unwillingness to sleep or rest is due to the fact that the mother has not provided a suitable place for him. Perhaps the mother herself is tired and nervous, or the room is not quiet. A restless spirit on the part of the mother is often reflected by the child. It may be that there is not sufficient fresh air, or that the child is uncomfortable. All of these matters should be considered in providing children with opportunity for adequate sleep and rest.

Recreation to the adult usually is of secondary importance. A change of activity or scene may give both mental and physical rest. But to the child, recreation is essential for growth and development. He is active, he is growing, he must play. "Play is his main job." Not only must he play indoors but he must be given opportunity for much outdoor play in the fresh air and sunshine. The outdoor games which children enjoy should be considered a part of their physical training.

Opportunity Must Be Given for Mental and Physical Activity.—Have you ever watched a child clamber up and down the steps, gaining skill and assurance at each trial? Have you ever noticed all the different activities in which a

toddler will engage in an hour's time? His attention cannot be held long by any one object, nor by any one activity. If there are not toys for his play, the baby pushes or pulls at the furnishings of the house. Sometimes his activity leads the mother to say, "What a bad boy." If the environment will not give ample opportunity for mental and physical activity, it is the environment that is bad, not the child.

Fig. 105. Outdoor play a part of each day is a good rule.

Studies show that little children frequently walk many miles daily. This activity furthers their growth. A child who is kept for much of the time in a chair so that he will stay clean and neat is being subjected to a poor environment. The provision for his mental and physical activity is inadequate. As children grow, it is necessary to meet their increasing needs. The home with school children needs

books, games, and provision for sport that need not be supplied for the two-year-old.

How would the environment of a high-school girl differ from that of a sixth-grade girl if the needs for mental and physical development were fully met for both?

The Environment Should Provide a Harmonious Atmosphere and a Feeling of Security.—These may be provided in the plainest of homes. Scientists believe that the failure of a home to furnish a harmonious atmosphere and a feeling of security reacts seriously on its members.

Families whose members continually disagree and quarrel fail to have a good background for their children. The child should feel at ease in his home and should find there a sense of security and of unity. He should feel that father and mother are in accord, and that there is no fear in his home. Perhaps you have read of some families where children were afraid of their father or mother and dreaded to go home at night. What effect would such a fear have upon a child? What effect would a lack of harmony in the home have upon the poise of the child?

Divorce often follows lack of harmony in the home, and it, too, has a marked influence upon the child. Dr. Katherine Davis says in regard to this, "It is a great misfortune when a child cannot have both father and mother. A child needs his father's guidance and protection as well as his mother's tenderness and care. A child who is passed back and forth, spending a part of his time with one parent and part with the other, is in danger of being spoiled. On the other hand, a child who sees his father only a few hours weekly certainly does not have sufficient fatherhood in his life."

Love and Affection Are Necessary.—These are factors whose influence cannot be measured but which are necessary to our well-being. Environment may supply every-

thing else but these two, and still be very poor. Even tiny babies do not grow and develop as they should when they are deprived of love and affection, or "mothering." Children in institutions where the food has been adequate and the life regular have, as a rule, failed to develop as well as they have when placed in homes and loved as individuals.

Freedom from Stress and Toil Is Important.—Have you read a book which portrayed the overwork of some child? Have you ever known a child to work too hard? What were the effects on the child? All physical and mental development is hindered when children are submitted to stress and toil. This does not mean that children should grow up in idleness, but that they should be given work which is suited to their ability, and which will not harm them.

What work do you think a child ten years old could do without injury? What are some conditions that bring stress? Sometimes a mother or a father confides in a child financial or family worries far beyond his understanding. The parent has had the satisfaction of a confidant, the child has the emotional and mental stress of difficulties he does not comprehend, and cannot solve. This is, of course, unwise.

Long hours of heavy work and the stress of difficult emotional or mental problems should be kept out of the environment of a child if he is to have a fair chance for growth.

Protection from Vice and Immoral Influence Should Be Afforded.—How will exposure to vice and immoral conditions affect the child? Suppose you make a list of such influences which you consider harmful to a child. How will it be possible to remove these influences from his environment?

In pioneer days the family had almost complete control over these influences in the environment. Neighbors were few, and the distance between settlements proved a barrier

against distant influences. Even as towns developed, men and women lived their lives with the people they had known always. The educational life was shared by the whole community. First the railroads and now the automobiles have broken down community lines so that people are soon away from the neighbors whose opinions they value. The newspapers recount the events, frequently criminal, of the whole world, and the moving picture often depicts in lurid light the life of a tawdry, sensual, leisure class as well as the life of the underworld. A great number of boys and girls who have become criminals and law breakers admit that their first offense came as a result of suggestion received at the moving-picture theater. The child can no longer be regarded as leading a protected life in the home. He is living on the highway of life, and the obscene and vicious often go that way in gay trappings.

Protection from vice and immoral influences, then, can only be afforded as public sentiment makes impossible undesirable publicity for wrong doing, and reduces it to the plane of the disgusting. The homes must carry the responsibility of inculcating ideals and controlling interests so that good will be sustained.

A Good Environment Should Be the Desire of Every One.—Since environment is such an important influence in our lives, parents should strive to give their children a good environment. Bringing up children on the streets, permitting them to attend the moving pictures promiscuously, and allowing them to associate with bad companions are means of furnishing bad environment.

Since not only the home but the well-being of the people of the community is affected by the caliber of the youth, the interest in securing the conditions of a good environment should be general. Home-maker, teacher, shop-keeper,

doctor, lawyer, and all others have their part in making the environment what it should be for the children.

Exercises.—A. Make a list of moving pictures which you consider vicious in their effect on children below Junior High School age.

B. Robert's parents have been divorced for many years, and his mother has had a restaurant. Robert has been raised on the streets and kept up at all hours of the night. He has worked beyond his strength much of the time. Last year he became involved in some difficulties and it seemed for a time that he might be compelled to serve a sentence in the reformatory. People in his town said repeatedly, "Poor Robert, he is not entirely to blame. He has never had half a chance." What did they mean by this statement? How would you class his environment?

PROBLEM 4.—WHAT IS THE RESPONSIBILITY OF THE HOME FOR THE ENVIRONMENT OF THE CHILD?

If you were asked to bound your environment, what would you say? From the point of time, your environment is bounded at one point by the beginning of your life in your mother's body, and at the other point by the present moment, when you are reading this sentence. In that period of time many forces outside your own body have affected your growth and development. All these forces that surround and affect you are termed your environment. If you were to make a list of these forces you would include provisions for food, shelter, clothing, rest, recreation, opportunity for mental and physical development, and for the development of your individuality, and all the social contacts with other persons from the time of your birth to the present.

It is often said that no two persons have identically the same environment. Even twin sisters, reared in the same family circle, do not have identical environments. How can this be true? In this case what environmental factors are most likely to be different?

A noted writer states that three-fourths of everything an individual ever learns comes to him through his home and the environment of which his home is a center. The responsibility of the home, then, is not just for those activities that are commonly accepted as its function. You expect your home to supply you with adequate food, clothing, and shelter. You know that many of your character traits can be traced to your family and your home environment. It is equally true that much of your mental and physical activity has had its impetus in your home. Besides all this, the home has the further responsibility of influencing the community so that the home activities may be ably supplemented.

The Home Should Provide the Best Possible Environment.—To meet these responsibilities requires knowledge of nutrition, health, social relations, and the allied sciences as well as devotion and a spirit of sacrifice on the part of both parents. It may be difficult to have the entire daily routine of life upset to provide for the unvoiced needs of youngsters who accept what they receive as their due with no particular sense of gratitude. However, such adjustment benefits the parent directly in his own personal growth, and indirectly in the progress it makes possible for his child. If the parents regard the child as their "visible immortality"—a link between them and the ages that are yet to be—the adjustments that are necessary for his growth become deeply significant. Then they realize that the environment of an adult affects his comfort but not necessarily his development, while the environment of the child directly influences his development. Within the home, that environment should prevail which will be most helpful to the child. Obviously, giving the child his way or making

his wishes the deciding factor will not prove desirable forces in the environment.

Provision Should Be Made for Child Companionship.— At some time you have doubtless heard someone say, "I am very fortunate. I have two brothers and a sister." Perhaps you knew that their family finances were limited

FIG. 106. A home playground in Okmulgee, Oklahoma. Courtesy Oklahoma State Dept. of Vocational Education.

and that the "two brothers and a sister" made strict economy necessary in the family. Perhaps there was little money for vacations or fine clothes, and the children were forced to earn their way through college. What advantages were there, then, in having brothers and sisters, that outweighed the self-denial and rigid economy that the larger family made necessary? Do you understand the feelings

of the little girl who, returning to her large family on Christmas Eve, said, "As I came past all the other houses, I was sorry for everyone who wasn't us"?

Why do people feel sorry for the home with only one child? Why does a home seem more complete when there are children in it? Brothers and sisters contribute as definitely to each other's development as the child does to the parents'. The emotional life of a girl is enriched by having someone of her own generation to share in her experiences. Further, her character traits are influenced by the daily necessity of being unselfish, considerate, and coöperative. The family is the best group in which to learn loyalty, honesty, and kindness. Here, too, the great lesson of adjustability is taught. Have you ever seen a family whose members were self-centered happily change its mode of living upon the arrival of a new baby?

The bond of affection that holds the family together is often one of the most cherished ties of the adult. The broadening interest that children bring to their parents is not greater than that which brothers and sisters may bring to each other. Sharing family funds that seem inadequate for even a smaller group may be made to yield values in mental and spiritual life that far outweigh any values the individual might secure were the income not so shared.

It is possible, of course, that a family may be so large as to make impossible a decent standard of living on the family income. Then the advantages that have been cited are lost. Can you explain why? A decent standard is not to be confused with a luxury standard. A decent standard provides for the necessities of life and a few of its comforts. To be justified in establishing a large family, the parents should be able to maintain a decent standard of living for

themselves and the children, and should have a mental and physical heritage which they are proud to pass on.

Would you be interested in knowing the cost of rearing a child from birth to the age of eighteen?

The following table presents the probable investment your parents will make in you.

An Estimate on the Dollars and Cents Cost of a Child.*

Cost of being born	$200–$300
Cost of feeding a child from birth to age eighteen	2,500
Cost of clothing a child from birth to age eighteen	1,002
Cost of housing a child from birth to age eighteen	1,620
Cost of fuel and light for child from birth to age eighteen	300
Cost of furniture, household equipment, and upkeep for child from birth to age eighteen	351
Cost of health items for child from birth to age eighteen	284
Cost of recreation for child from birth to age eighteen	130
Cost of insurance for child from birth to age eighteen	54
Cost of sundries for child from birth to age eighteen	570
Cost of education items met by family for child from birth to age eighteen	50
Total	$7,161
Cost of education provided by the community from birth to age eighteen	$1,100
Total	$8,261

*Based on "Cost of Living Studies," Bureau of Labor.

Some Homes Must Have Help in Meeting Their Responsibility.—In what ways may homes find it necessary to have help? The home may need help in providing mental and moral guidance to its children. The schools, the church, and the juvenile court and its probation officers are means through which the community may help the home. The home may need special information. Classes for homemakers are opened in evening schools to furnish help in this line. In many states, practically every county has a home demonstration agent whose duty it is to be of service to

the rural home-maker. The federal government maintains the Bureau of Home Economics and the Children's Bureau through which printed information is available.

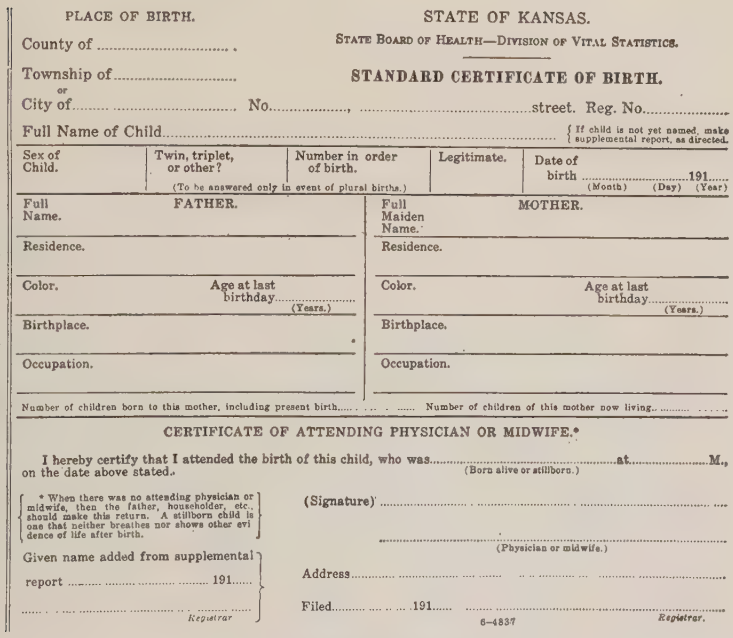
A low income may make it necessary for the community or county to aid the family in order that the children have adequate food, shelter, and clothing. Economic pressure may send the children out of the home to earn their living. The state and federal government must then safeguard the children by laws rigorously enforced that will protect them from excessive toil and exposure to harmful influences.

PROBLEM 5.—WHAT IS THE RESPONSIBILITY OF THE COMMUNITY FOR THE ENVIRONMENT OF THE CHILD?

The Community Must Protect the Child.—Although it is necessary for the community to help the home in providing a good environment for the child, the interest of the community in the child is entirely different from that of the home. The home loves the child as an individual, and desires for him all that will contribute to his personal happiness and success in life. The community sees in the child the future citizen. The wise community realizes that the community of tomorrow will be no stronger than its citizens, and therefore desires to make its future safe. A law-breaking, idle, or ill citizen is an economic liability and a social menace against which the community must guard itself. The community must protect the life and health of its children and take all possible measures to secure their development into social and economic assets for the future.

Birth Registration Is Important.—Have you ever seen a birth certificate? What information did it contain? Nearly all states now have some kind of a birth-registration law

whereby they may have a complete record of births in their states. Several years ago (1915) the Bureau of Census established the birth-registration area. A state belongs in this area if 90 per cent of the births are registered. Does your state belong in this area?



PLACE OF BIRTH.

County of .....

Township of .....

or

City of ..... No. ....., ... street. Reg. No. .....

STATE OF KANSAS.

STATE BOARD OF HEALTH—DIVISION OF VITAL STATISTICS.

STANDARD CERTIFICATE OF BIRTH.

Full Name of Child ..... { If child is not yet named, make supplemental report, as directed.

Sex of Child.	Twin, triplet, or other? (To be answered only in event of plural births.)	Number in order of birth.	Legitimate.	Date of birth .....191..... (Month) (Day) (Year)

FATHER.

Full Name.

Residence.

Color. Age at last birthday..... (Years.)

Birthplace.

Occupation.

MOTHER.

Full Maiden Name.

Residence.

Color. Age at last birthday..... (Years.)

Birthplace.

Occupation.

Number of children born to this mother, including present birth..... Number of children of this mother now living.....

CERTIFICATE OF ATTENDING PHYSICIAN OR MIDWIFE.*

I hereby certify that I attended the birth of this child, who was.....at.....M., on the date above stated. (Born alive or stillborn.)

* When there was no attending physician or midwife, then the father, householder, etc., should make this return. A stillborn child is one that neither breathes nor shows other evidence of life after birth.

(Signature) .....

(Physician or midwife.)

Address .....

Given name added from supplemental report .....191.....

Filed.....191.....

Registrar

6-4837

Registrar.

WRITE PLAINLY WITH UNFADING INK—THIS IS A PERMANENT RECORD.

N. B.—In case of more than one child at a birth, a SEPARATE RETURN must be made for each, and the number of each, in order of birth, stated.

FIG. 107. Birth certificate.

Many reasons are offered for birth registration. A few are listed below. Can you think of any more?

1. To establish identity, parentage, nationality, school age.

2. To enforce the law of school attendance and child labor.

3. To establish marriage age, right to inheritance, voting privilege.

4. To give accurate knowledge of the number and ages of citizens.

5. To secure a passport.

Have you ever known a person to need a birth certificate? For what reasons was it needed? In many of our large cities children first starting to school must bring a birth certificate before they are permitted to enter. What is the law of your state in regard to birth registration?

Birth registration furnishes one of the most important means of studying infant mortality since it gives facts on which death rates can be computed. Upon the information thus supplied communities adopt preventive measures.

Lessening Infant Mortality Is a Responsibility.—By infant mortality, we mean the number of deaths of children under one year of age. It is usually expressed as the number of deaths in proportion to one thousand births, and this rate is called the infant-mortality rate. A community that has a high rate knows that its environmental conditions are not what they should be.

Infant mortality is due to many causes. Prenatal influences are probably the greatest since the most deaths occur during the first month of life. Digestive disturbance, respiratory infection, and other communicable diseases take their share. The death of infants is wasteful both in life, time, and money and everything possible should be done to insure its decrease.

New Zealand has a low infant mortality rate—forty-eight deaths in one thousand births. Japan has a high rate: one hundred and eighty-nine deaths in one thousand births. In twenty-two years to 1922, the rate in the United States dropped from one hundred and seventy to seventy-six, a

decrease which represents a great achievement in the prevention of the needless waste of life.

What is the infant mortality rate in your community? How does it compare with that of your state?

The Community Has a Responsibility in Providing Education and Recreation.—The community is directly responsible for providing free educational opportunities to its children. Good schools are an indication of a good com-

Fig. 108. One view of Tulsa prize winning Home Playground. Courtesy of Oklahoma State Board for Vocational Education.

munity. Our forefathers in the beginning of our nation established the school as a community responsibility and so it still remains. The community desires that its children be educated that they may become intelligent citizens.

We are coming to realize that recreation goes hand in hand with education and training, and that the community has a responsibility in furnishing good, wholesome recreation. Playgrounds, parks, and swimming pools are all

expressions of this attitude. In many localities the playground supervisor is in the regular employ of the school. A mayor in a mid-west town was asked if the city was justified in expending so much for a free municipal pool, to which he replied, "Most assuredly. We have fewer boys on our streets and in our courts. We have given them wholesome and constructive recreation."

FIG. 109. Second view of Tulsa prize winning Home Playground. Courtesy of Oklahoma State Board for Vocational Education.

Exercises.—A. How is your community providing good environment for its children?

B. What more do you think should be done?

C. Tom is a baby one week old who was born in a community where the infant mortality rate is high. Whose responsibility is it to insure Tom a safe place to live? What can the community do to safeguard its babies?

D. Can you tell which of these statements are correct and which are incorrect?

1. Environment is the term used to denote our resemblances, which are based on our ancestry, and occur again and again in our families.

2. Characteristics which we acquire after birth are not inherited by our descendants.

3. Intelligence, feeble-mindedness, and musical ability are inherited qualities.

4. The family inheritance is usually a handicap.

5. Our inheritance can be modified to great extent by our environment.

6. Ill health, malnutrition, and venereal disease are environmental factors which affect the child before birth.

7. A good environment helps the individual to make the most of his heredity.

8. The home has small difficulty in providing a good environment for the family.

9. The community must do everything in its power to provide a good environment for its children.

10. Infant mortality is a recent problem of society.

11. Heredity exerts an influence on the child in accordance with known laws.

12. Birth registration is a means of protecting the community.

Additional Problems and Exercises.—1. Compare the histories of the Jukes and Edwards families. What causes can you suggest as being responsible for the success and failure of these families?

2. Make a chart of color inheritance for the first and second generation of chickens from the mating of a black hen and a white cock.

3. Obtain from your city clerk a blank used for the registering of births. What information is required in filling this out?

4. Make a survey of the families represented in your class, or in a certain district of your community, to determine how many children under six have birth certificates.

5. What is the infant mortality rate in your community? How does it differ from that in your state? What explanation can you offer for this condition?

6. Make a report on the federal Shepard-Towner Act and its provisions. What state law of similar purpose has your state? (Write State Board of Health.)

7. Prepare a score-card and judge your own community as a desirable place to rear children.

8. Write a paper on the inheritance of color-blindness.

Books for Class Reference:

Jewett, F. G. "The Next Generation." Ginn and Co.
Williams, J. F. "Healthful Living" (revised). Macmillan Co.

UNIT TWO

CARING FOR THE INFANT AND PRE-SCHOOL CHILD

Introductory Studies.—1. Schedule a day's care of the baby.

2. How much time will the mother spend in caring for the child?

3. Upon what items will most of this time be spent?

4. Make a list of the foods which are good for a three-year-old child to eat.

5. Plan a breakfast for a five-year-old child.

6. What are the most common diseases of childhood?

Presentation of the Unit.—Have you ever observed how much care a child requires? If there is a baby or a small child in your own home or if one lives near you, notice how much time the mother and other family members give to him. Of course some children may receive more time and attention than is necessary or good for them, but in most cases the time used is required. Mothers sometimes say, "Baby takes all of my time," or, "I don't get a thing done but look after those two children." Studies have been made which show that the mother is very nearly correct in her statement. A large share of her time must be used in giving adequate care to her children. In a study made in Kansas in 1924, the average time required for care of babies under twelve months, was found to be from five to five and seven-tenths hours a day. Other studies confirm these data.

The care of the child begins with the care of the mother before her baby comes. Have you a baby brother or sister in your home? If so, you will remember the long months of waiting for his arrival. Perhaps in your family, as in many others, the arrival of the baby was looked forward to

by all the family. Your father and you may have discussed with your mother the coming of "our baby." Perhaps very early when you were first told that the baby was expected, someone explained to you that these months would be difficult months for your mother. The development of the unborn child was a severe drain upon her body and however much she might wish to be poised and serene, her nervous system might be so disturbed that she would cry or

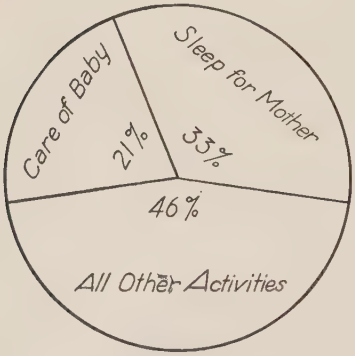


FIG. 110. How the care of a baby affects the mother's day.

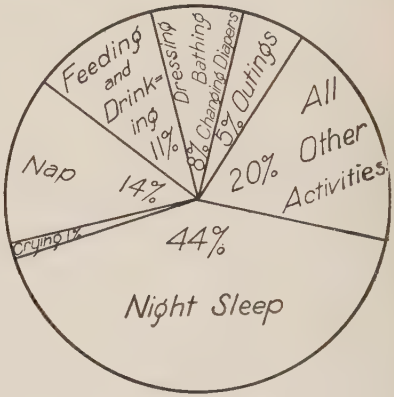


FIG. 111. How baby spends his day.

become irritated over trifles, and be sensitive to comments and attitudes on the part of her family.

Since the baby was to mean so much to all of the family, since he was the "family's baby," it seemed only fair that all its members should maintain an understanding and helpful attitude to the mother. All should join in making the mother's weeks before and after his arrival as happy and free from anxieties as possible.

During pregnancy, the mother should have help with the household work, and she should not do any heavy work

or lifting. She needs exercise, but it should be taken with judgment. It is better for her to do her housework for most of the period, allowing only the heavy work to be done by someone else. She needs outdoor exercise and recreation, and should have a regular time for this. While walking is desirable, she must avoid over-exertion as, for example, running to catch a train; for such a strain may bring on a miscarriage or premature birth, usually resulting in the death of the baby and always of danger to the mother. During confinement period she should be freed from all responsibility for the household tasks.

She also needs adequate rest and sleep, and should plan for these in her daily schedule. She should not allow herself to become too tired or to lose sleep. Fatigue is just as serious for her body as is bad food or disease. The mother should make herself happy during this time, and should keep herself calm and serene.

The diet of the expectant mother should be given careful attention, for the mother's food during this period not only has a direct effect upon the mother but upon the body of the baby too. What foods do you think the expectant mother should eat? Why have you listed certain foods in particular? The diet should be well-balanced, and vegetables, coarse cereals, fruit, and milk, with meat and eggs in moderation, should form its basis. It is particularly important that the diet be adequate in mineral content. The mother needs iron to maintain her own blood, and to build a good supply for the baby. If the diet is deficient in calcium, the material of the mother's own teeth is drawn upon to meet the needs of the unborn child; then dental difficulties develop. Nature so provides that the needs of the child are met first, despite the ravages made upon the body of the mother. However, the needs of the child cannot be met

entirely from the minerals stored in the mother's body. If the mineral content of the expectant mother's dietary is low, this fact will probably be shown later in the poor quality of her child's teeth.

Frequently, mothers feel that they should increase the amount of their food to a large extent. This is an erroneous idea. The quantity need be increased but little, especially in the early months of pregnancy.

Stimulants, such as tea and coffee, and rich pastries and desserts, should be used sparingly. The expectant mother should have regular habits in her eating, and should not undertake a special diet unless so ordered by her physician. She must remember that the new body must have food to make bone, blood, and muscle, and she must not omit the foods which supply these tissue-building materials.

Cleanliness is essential for the health and comfort of the mother. The daily bath during pregnancy is refreshing, stimulating, and aids in throwing off the body wastes. The teeth should be brushed at least twice a day, and given careful attention. Habits and practices which make for the health of the mother before the baby comes should be encouraged, for prenatal influences of this kind directly affect the health and well-being of the baby.

In planning her wardrobe, the expectant mother should choose comfortable and attractive clothing which does not confine nor restrict the body in any way. It is possible now to buy pleasing garments or patterns for maternity clothes, and no mother need stay at home because of her personal appearance.

During the periods of pregnancy and confinement everything possible should be done to safeguard the health of the mother. She needs adequate medical and nursing care throughout these periods. Complete physical examinations

should be made at the various stages. No matter how well the prospective mother feels, a periodical check-up of health including analysis of urine is necessary. Only by this means can assurance be had that the bodily functions are normal. She should place herself under the doctor's supervision just as soon as she knows that a child is conceived, and she should also remain under his care for at least six weeks after the baby is born.

In planning for the baby's arrival, the mother must decide whether she will go to the hospital or remain at home. She should list the advantages and disadvantages of each before she makes her decision. What are some of the items that will appear in each column? In many communities there are excellent hospitals with well-trained and carefully supervised nurses where good care is afforded. In such places the hospital seems a wise choice. If the confinement is to be at home, a trained nurse should be employed if at all possible, or else a practical nurse who is intelligent, clean, and willing to follow the doctor's orders. An important factor in the choice should be the mother's attitude toward the plan. It is desirable that she approach the confinement with assurance that everything possible has been done to insure her safety and comfort during this period.

PROBLEM 1.—HOW WILL A REGULAR SCHEDULE AID IN MAINTAINING THE CHILD'S HEALTH?

Regularity in the Life of the Child Is Important.—What is meant by the term regularity? Its use here means having a stated time for all of the child's activities and for attending to his necessary care. Have you ever known a mother who did not believe in having a definite time for the baby's nap or meals? Was the baby a fretful and nervous child? Regularity is one of the most important factors in the

child's health, and a regular schedule should be followed from birth. Some mothers say that this method takes too long, but a recent study made with several mothers and their babies indicated that the mothers who did not believe in following a regular schedule because "it took so much time" actually used more time than those who followed a schedule.

The schedule should include feeding, bath, sleep, play, exercise, and outings. One of the important responsibilities of the nurse is to start the baby at once on a regular schedule and to establish those regular habits which contribute so largely to a child's health.

Regularity of Meals Is Necessary.—Have you ever known a mother to allow her children to eat whenever they cried? What was the effect of this habit upon them? Sometimes people have the notion that a nursing baby should be fed whenever he fusses, thus keeping the baby's stomach working all of the time. Similarly, some parents permit older children to eat cake and sweets between meals, and then wonder why they have no appetite at meal time.

Regularity of meals is essential in every period of childhood. The most common causes of indigestion and stomach trouble in babies and children are irregular and too frequent feedings.

Regular Sleep Periods Are Essential.—Next to food, sleep is the most important factor in the growth of the child. You will recall that a certain amount is required for children of different ages. How would you plan the sleep periods for a two-year-old child? Several long periods are much better than many short ones because the child does not become entirely rested if the sleep periods are broken into short naps.

Regularity in sleep habits should be established at the beginning of the child's life. Many difficulties which arise later in regard to a child's sleep schedule could have been

prevented if a right start had been made in the beginning. Parents frequently do not wish to stay at home with the child while he is sleeping. They take him out when he should be in bed. This practice is very hard on his nervous system and shows bad results.

A little boy of six has been for several years considered the worst child in town. He is very nervous, is into everything, and is almost uncontrollable. Even when a small

Fig. 112. Regularity of meals is a great aid in maintaining health.

baby he never knew a regular time for sleep. He has been up until all hours of the night. He has been taken regularly to the picture show and to all types of amusements and entertainment. Despite the neighbors' comments, he is not really a bad child but only a worn-out one. Probably you know of such a child in your community.

The young child should go to bed early every night. The afternoon nap should be continued at least until the

child starts to school. The mother who says, "I can't get my child to take a nap," is admitting that she has failed to establish regular habits for her child's sleep and rest.

Regularity of Elimination Is Important.—The training for regularity of the bowel movement should be started very early in the baby's life so that this habit may soon be established. A well baby usually has from two to four bowel movements during the twenty-four hours. If a baby is fed and bathed at a regular time and also has regular sleep periods, he usually has regular bowel movements.

At the age of three months a mother may begin training the child to use the stool. Some authorities even suggest beginning at an earlier age than this. Small porcelain chambers are made for the child's use. A porcelain cuspidor with rounded edges may also be used. The chamber is warmed and placed on the mother's lap. The baby is then seated on the vessel, being carefully supported by the mother. If this procedure is followed for a few minutes regularly after the first morning feeding and after the evening feeding, some twelve hours later, the number of soiled diapers will be greatly reduced. Have you ever known a mother to train her young baby in this manner?

Some mothers are successful in training their babies to use the chamber for urinations. By establishing a regular schedule they are able to reduce the number of wet diapers also. Of course, such training requires much time and patience in the beginning, but the amount of time saved in the end is worth the effort.

A Regular Schedule Should Be Carefully Followed.—A plan for the infant's day, with four-hour intervals between feedings, is given below:

6:00 A.M.—Feeding
8:30 A.M.—Orange juice or tomato juice

9:00 A.M.—Training for bowel movement
9:15 A.M.—Bath
10:00 A.M.—Feeding and cod-liver oil
10:30 A.M.—Outdoors in carriage, sun bath, asleep most of the time.
to Drink of water after nap.
1:45 P.M.—
2:00 P.M.—Feeding
2:30 P.M.—Outdoors in carriage in the sunlight as long as the season permits. Drink of water after nap.
5:30 P.M.—Undress, sponge bath, get ready for bed
6:00 P.M.—Feeding and cod-liver oil
6:15 P.M.—In bed
Mother's bedtime—Feeding

A plan for the toddler's day shows some changes:

This plan may be adopted at twelve months, and holds until the school-day routine is established:

6:00 A.M.—Milk
8:00 A.M.—First meal
8:30 A.M.—Bowel movement
9:00 A.M.—Sponge bath and dressing
9:30 A.M.–11:30 A.M.—Outdoors in sunlight when season permits
11:40–12:00—Luncheon
12:30–2:30—Nap
2:30 P.M.—Wakened, given a cup of milk and possibly a sandwich
2:30–5:00—Out of doors in sunlight when season permits
5:30–6:00—Cleansing bath, dress for bed, play
6:00 P.M.—Supper
6:30 P.M.—Bed

The planning of a schedule will be of much help in establishing good habits in the child. All of the activities and care should be arranged for in this schedule, which must be followed, though this may require determination and effort in the beginning. Since repetition for three days establishes a habit in a baby, the difficulty is soon settled.

Exercises.—A. Plan a schedule for the baby six months old for a day of twenty-four hours.

B. Make a schedule for the child two years old.

C. Jane is six months old. She is very cross and cries a great deal. Jane's mother feeds her every time she fusses, and has no regular time for her sleep periods. Jane is very nervous and is not gaining as she should. What plan can you suggest to her mother to help correct this condition?

PROBLEM 2.—WHAT FOOD SHALL BE GIVEN THE BABY?

The Baby Needs Food for Energy and Growth.—Have you ever watched a tiny baby as he lay in his bed? If you have, you no doubt observed that he is never still. His muscles and limbs are constantly moving. His body processes are rapid and there is motion in every part of his body. This movement accompanies growth, and itself requires an expenditure of energy which comes ultimately from the baby's food. His body temperature, too, must be kept up if his body is to function, and this requires energy from the same source.

A healthy baby grows very rapidly. He doubles his birth weight in the first six months and triples it by the end of the year. He needs food for this body-building and he needs food for his daily energy requirement for external and internal body activities.

Mother's Milk Is the Best Food for the Baby.—This fact has long been recognized. Since nature has prepared it specially for the child, it is always clean and sweet and at the correct temperature. No real substitute has yet been discovered.

The breast-fed baby is much less apt to become ill than is the bottle-fed baby. A study of the records of infant mortality shows that more artificially-fed babies die than do breast-fed babies. Most mothers can nurse their babies if they wish to do so. Probably not more than five per cent are physically unable. Of course, if breast feeding is to be

successful, the mother must take good care of her own health and eat wholesome and sufficient food. She should include plenty of milk in her diet (a quart daily), and should have proper rest, sleep, and recreation periods.

In certain cases a physician may advise against breast feeding. In this case, modified cow's milk is prepared according to the formula furnished by the physician. Artificial foods are not much employed; some of them do not furnish adequate growth materials and some are difficult to digest. As the baby grows his food will be changed from time to time upon the advice of the physician.

The Baby Should Be Fed at Regular Intervals.—Have you ever heard of a baby being fed "by the clock"? What was meant by such a statement? Regular feeding periods are very important for the baby and should be established from the very first. The new-born baby's stomach has a capacity of about two fluid ounces, so he cannot take large quantities at a time. Just as the adult is in better health with three regular meals than with food at any and all times during the day, so the baby thrives better on a regular schedule. However, since his stomach is so small, the baby requires more meals than the adult.

What feeding intervals have you known mothers to use? A schedule of meals at first on three- or four-hour intervals is considered best. In cases where the three-hour schedule is used the baby is changed at the age of six months to the four-hour one. For the first three months, one night feeding may be used, but even this is not necessary. Babies fed at regular intervals rest well, are better nourished, and have a finer development than babies who are fed irregularly.

The Baby Needs Water.—Sometimes mothers are careless about this need and fail to give the baby enough water.

Usually a baby must learn to drink water. It should be given to him from the very first day. During the first week at least two teaspoonfuls should be given daily. This amount should be so increased that by the age of six months the baby is getting from two to three teaspoonfuls between feedings. The water can be given from a spoon or a nursing bottle, and should be cool. Only cooled, boiled water is used. Many a baby is fretful and cross because he needs a drink of water.

Orange and Vegetable Juices Are Added Early.—The baby grows rapidly, and his requirements change and increase with his growth so that early additions to his diet are necessary. Just as the adult needs vitamins in his diet, so does the baby. Mother's milk after a time fails to furnish these in sufficient quantity. Consequently orange and vegetable juices, such as spinach, carrot, and tomato, are very early added to the diet. At first only a few drops are given and the increase then is made gradually. Frequently these additions are made as early as three months. In some cases, when the need is indicated, the doctor adds cod-liver oil. Cod-liver oil is more necessary for artificially-fed babies than for breast-fed. It supplies vitamins and stimulates growth.

Strained Cereals and Vegetables Are Soon Used.—When the baby is five months old strained cereals and vegetables are usually added to the diet. These are cooked thoroughly, put through a sieve, and substituted for the milk at a feeding period. At first only a teaspoonful or two should be given, but the amount may be increased until the child is taking a tablespoonful. Later, milk may be added to the cereal or vegetable. Oatmeal is an excellent cereal for the child. The vegetables which should be used are spinach, peas, and

carrots. These vegetables will supply the needed iron for the baby.

Changes Should Be Made Only upon Advice of a Physician.—Any changes in the baby's diet should be made only upon the advice of the physician. The many factors which affect the baby's physical condition should be understood before prescribing changes in diet.

Exercises.—A. Prepare cereals and vegetables for a six-months old child.

B. Jeannette is a baby one month old. In general what should be her diet? What shall be her diet when five months old?

PROBLEM 3.—WHAT ADDITIONS AND CHANGES SHALL BE MADE IN THE DIETARY AS THE CHILD'S REQUIREMENTS INCREASE?

The Child's Increasing Requirements Should Be Met.—His mother's milk becomes inadequate for him by the end of nine months or a year. He needs more food for energy; he needs more food for growth. He is still far from ready to be given the solid foods of the adult diet. This change formerly was called the weaning period, and consisted of abruptly taking the child from the breast and giving him a new diet which was frequently the diet of his parents. We no longer speak of the weaning period, because cow's milk is gradually substituted for mother's milk and the amount of strained vegetables and cereals is increased.

This increase in food requirement continues throughout growth period, and adequate provision must be made for the various stages of development. Children should be taught early to like a variety of vegetables, fruits, and cereals. It is believed that the reason many adults do not enjoy variety in their diet is because they did not learn to like all foods in their childhood.

Certain Foods Should Be Included in the Diet.—The amount of cow's milk which is commonly recommended for each individual during childhood and adolescence is one quart each day. In some cases inclusion of this amount of milk in the diet has led to a failure to meet the caloric requirement of the body. A child of three who has had a quart of milk may have felt satisfied after each meal and yet will not have had adequate fuel for his activity. It is essential that at least a pint of milk per person be used daily. After this minimum requirement has been met, it is well to see that solid food such as cereals, legumes, vegetables, eggs, and meat, be used to meet adequately the caloric and iron requirement before insisting that the second pint be consumed. Usually when this is done, the child will take the second pint. "It slips into the cracks," one child says. Not all of the milk need be served as milk. It may be used in the making of soups, sauces, beverages, and desserts. Have you ever known a child who refused to drink milk? What means can you suggest for overcoming this difficulty?

Cereals, vegetables, and fruits should be used largely in the diet. The whole grain cereals, well cooked, are desirable. For the very young children (ordinarily until the child is from twelve to fourteen months old) the vegetables and fruit should be put through a sieve, but the older children can use to advantage the roughage supplied by the unstrained food. Chopped, uncooked lettuce, cabbage, and carrots are given as early as two years. Hot breads should be avoided in a child's diet. Baked potato may be used by the end of the first year. The yolk of the egg is frequently given in the fifth and sixth months, soft boiled, scrambled, or creamed, but never fried. Egg becomes a part of the diet as early as twelve months and its daily use is to be recom-

mended. Foods which require chewing should not be omitted. For that reason dry and toasted bread are given early and continued through the pre-school period.

Authorities differ on the advisability of using meat in the children's diet. There are those who believe it should not be given to them before the age of seven or eight years. These persons believe that the incomplete digestion of meat leaves a residue which exerts harmful effect upon the body, and that the use of meat also prevents children from eating the other necessary foods, such as milk and vegetables. Others believe that meat should be given in moderation beginning when the child is eighteen months old. They hold that the inclusion of meat two or three times per week will supply the iron and protein which the growing child needs, and that, if well cooked and prepared, it will exert no harmful effects.

In deciding between these methods, the advice of a reliable authority should be sought and the recommended procedure followed.

Desserts Should Be Carefully Chosen.—Custards, cornstarch, bread puddings, and fruit and gelatine desserts may be given when the child is one year old. Later on plain cakes and cookies may be added. Except for the very young child ice cream and ices are good desserts. Rich pastries and puddings have no place in the child's diet.

Below are given two dietaries according to Dr. Margaret Chaney, Kansas State Agricultural College, one for a twelve-months-old child, and one for a three-year-old.

Weight Is an Important Index of Nutrition.—How can you tell when a child is in a state of good nutrition? If a child is up to his standard weight, has a good appetite, and sleeps well, we can feel rather sure that his nutrition is good. From the first to the eleventh year, the average gain of a

A Day's Food for a Child One Year Old

7:30 A.M.			
Oatmeal	¼ c.	Wheatena	¼ c.
whole or top milk	¼ c.	whole or top milk	¼ c.
Milk	1 c.	Whole-wheat or white bread, toast	¼ slice
Whole-wheat or white bread, toast	¼ slice	butter	½ tsp.
butter	½ tsp.	Milk	1 c.
Stewed prunes	3 tbs.	Sliced orange	½
9:30 or 10 A.M.			
Juice of 1 orange		Tomato juice	¼ c.
Cod-liver oil	½ tsp.	Cod-liver oil	½ tsp.
12 M.			
Soft-cooked egg	1	Stew or meat broth, carrots, onion, and turnip	½ c.
Buttered spinach	¼ c.	Baked potato	1 small
Baked potato	1 small	butter	1 tsp.
butter	1 tsp.	Milk	1 c.
Milk	1 c.	Baked custard	¼ c.
Junket	¼ c.		
3 P.M.			
Milk	1 c.	Milk	1 c.
6:00 P.M.			
Stewed tomatoes	⅓ c.	Milk toast	1 slice + 1 c. milk
Buttered toast	1 slice	Buttered beans	¼ c.
Milk	½ c.	Canned peaches	½ peach
Apple sauce	¼ c.		

A Day's Food for a Child Three Years Old

7:30 A.M.			
Oatmeal	½ c.	Wheatena and dates	½ c.
whole or top milk	¼ c.	whole or top milk	¼ c.
Milk	¾ c.	Milk	¾ c.
Whole-wheat bread toast	1 slice	Whole-wheat toast butter	1 slice 1 tsp.
Apple sauce	¼ c.	Grapefruit	½
butter	1 tsp.	sugar	1 tsp.
10 A.M.			
Orange juice	1 orange	Tomato juice	¼ c.
Cod-liver oil	½ tsp.	Cod-liver oil	½ tsp.

A Day's Food for a Child Three Years Old—(*Continued*)

12 M.			
Lamb chop	1 small	Egg soufflé	¼ c.
Mashed potato	¼ c.	Baked potato	1 small
Creamed carrots	¼ c.	butter	1 tsp.
Raw cabbage sandwich	1 small	Buttered spinach	⅓ c.
Milk	¾ c.	Lettuce sandwich	1 small
Tapioca cream	¼ c.	Milk	¾ c.
		Cornstarch pudding	¼ c.
3 P.M.			
Milk	¾ c.	Milk	¾ c.
Graham cracker	1	Graham cracker	1
5·30 P.M.			
Cream of tomato soup	½ c.	Cottage cheese sandwich	1 small
Whole-wheat bread	1 slice	Buttered beans	¼ c.
butter	1 tsp.	Milk	1 c.
Milk	½ c.	Fruit jello	⅓ c.
Prune sauce	¾ c.		

child should be about five pounds each year. After that, the child will gain an average of ten pounds a year until the time of growth is over.

Underweight in children is a cause for concern. If a child is seven to ten per cent below the average weight for his height and age, he is said to be underweight, and may be suffering from malnutrition, or some other underlying cause of disease. Underweight indicates weakened resistance in the individual and lowered physical vitality. Any child who is underweight should be placed under the care of a physician and everything possible done to bring him into a state of good nutrition. Though there are many causes of undernutrition, bad eating habits are among the important. Do you know of any children who are underweight? What kind of eating habits do they have? What would you suggest to help them bring their weight up to normal?

Exercises.—A. Prepare a day's dietary for a two-year-old child.

B. Prepare a day's dietary for a four-year-old child in which a quart of milk is used, one pint only being used as beverage.

C. Prepare a day's dietary for a four-year-old child, using one pint of milk only. Use increased amounts of fruits and vegetables to make a balanced dietary.

PROBLEM 4.—HOW SHALL WE CARE FOR THE FOOD OF THE CHILD?

Usually much attention is given to planning the child's dietary. The list is carefully checked to make sure that his food requirement is met. Essential as is such planning, it is not sufficient to secure safe nourishment for the child. Proper care of the thoughtfully planned food is also necessary.

Care Should Be Taken in the Purchase of Food.—The first requisite for food is that it be sound, in good condition, and fit for consumption. The wise home-maker will select the food for her family personally to see that it meets this rule. Have you ever opened a sack of bananas only to fine two out of the dozen were badly decayed? Perhaps a can of tomatoes showed a slight bulge, and on opening, a peculiar acid taste. In either case, the food as purchased was not suitable for human consumption. Any food about which there is the slightest doubt should not be used for a child. Over-ripe and moldy fruit, stale vegetables, and foods with a slightly spoiled odor or peculiar flavor should be thrown away. The risk of the child's health is too great to permit their use even being considered.

Food should be marketed in a sanitary condition. Bread that has been unwrapped and exposed to the flies and dust is a poor purchase, however attractive the shape of the loaf may be. Cookies that are counted through the grocer's hands onto the scales and then handled again before being placed in a sack have the possibility of carrying disease germs. Food that is not to be cooked should be purchased in sanitary packages.

Have you ever seen milk being sold out of a large open can? Why is this a dangerous practice? If no other milk were available, what measures could be taken to make this milk safe for family use?

There are indications by which the freshness of fruits and vegetables may be judged. The "snap" of the bean, the "spring" of a canteloupe, and the firmness of a head of lettuce are examples of such. The complete list for all fruits and vegetables is lengthy but many of the tests you have doubtless learned in your foods course. To select fresh foods, it is essential that the use of such tests be made.

Food Should Be Carefully Stored.—Have you ever visited a home with an old-fashioned pantry? Do you recall its shelves loaded with cereals, dried fruits and vegetables, the bins filled with flour and sugar, and the spice cabinet redolent with the fragrance of cinnamon, nutmeg, and clove? Perhaps in the basement of this same home there were barrels of potatoes and apples, and many jars of pickles, jellies, and jams. Because many of these foods were produced in the home and provision for their storage was necessary, plans for the home always included plans for storage. Today the person who lives in a small apartment or bungalow has but little space for storage. What explanation can you give for this? What could one do with a barrel of apples or a hundred-pound sack of sugar in a three-room apartment? The availability of food on the market, the excellent provisions for storage of food in the stores, and rapid transportation have all had a part in changing the food-storage problem of the home. The change has been rather in quantity of food to be stored than in the kind. Today many housewives store potatoes by the peck, butter by the pound, and cabbage by the head, instead of in larger quantities.

Regardless of the amount, the principles remain the same and may be expressed in a few simple rules:

1. All food should be protected from dust, dirt, rodents, and flies.

2. Food should be stored in a dry place with good ventilation.

3. Food should be kept at a low temperature.

Even clean food requires care in storage. The place where the food is kept must be clean if the food is to remain clean. A dirty ice-box or cupboard and improperly washed dishes may contribute to food spoilage and bring the illness that results from eating tainted food.

Milk should be kept covered and cold. Thoughtless housewives sometimes pay an extra price for clean milk and then allow it to become unfit for use in their own homes. Only clean pure milk should be given to children.

Clean Utensils and Dishes Should Be Used.—Have you ever seen a mother care for the baby's bottles? Probably she proceeded in this manner: She carefully washed in warm soap suds the bottles, nipples, and all the utensils used in preparing the food. Then she put them in a large pan of water and boiled them for half an hour. After this was done she put them in a clean, covered place where they were ready for her use as she needed them. This method is followed with all utensils and dishes used in connection with the food of the baby. After the child becomes older the long period of sterilization is usually discontinued and, after careful washing, the dishes and utensils are rinsed with boiling water and put in a clean protected place.

Food Should Be Well Prepared.—Have you ever heard the regretful comment, after a meal in a public place, "So much good food spoiled in the cooking!" Perhaps you recall the over-done steak, the greasy potatoes, the gritty

spinach, and the heavy cake. Food spoiled in this manner constitutes a health hazard to even the sturdy adults, and is a very serious one to a child. Half-cooked, under-done, poorly-seasoned, and unattractive food is not wholesome for a child, nor is it appetizing. It may lead to prejudices that will be shown in poor food habits. One is reminded of the remark of the child who said, "Sure I know spinach has iron in it, because I can feel it between my teeth; but I don't like it." Some children care little for the vegetables because of their faulty preparation. What constitutes well-prepared food? It is not possible to say, "Baked food is well prepared and wholesome," nor can such an unqualified statement be made about any method of cookery. The types and kinds of foods are too many and too different to permit any such generalization. It is much better to establish definite standards which may serve as a guide regardless of the food or method.

The following rules are suggested. Can you add others?

Well-prepared food is:

1. Clean and free from extraneous material.
2. So cooked that it is easily digested.
3. So seasoned that the natural flavor is enhanced and not concealed.
4. So prepared that it can be easily eaten by the child with little assistance from adults.
5. So served as to be attractive and pleasing to the child.

Exercises.—A. Wash and sterilize bottles, nipples, dishes, and utensils used in preparing and serving baby's food.

B. Boil milk; pasteurize milk.

C. Elizabeth has always lived in an apartment house in a city. She has married a rancher and will live on a Wyoming ranch thirty miles from a railroad. How will her food-storage problem differ from that she has had in her city apartment home?

PROBLEM 5.—WHAT PHYSICAL CARE SHOULD BE GIVEN THE CHILD?

The Bath Is Very Important.—On a hot, dusty day, have you ever found yourself greatly desiring to leave whatever you were doing and take a bath? Perhaps you have done so and have been much rested and refreshed, relieved of the fretfulness and irritation that wearied you. If you had been unable to bathe yourself—if you were dependent upon others to know why you were fretful and irritable—your position would be similar to that of a baby. The bath means as much in relief and rest for him as it does for you. To insure his comfort, a definite place for a daily bath should be made in his schedule. This place will be at least one hour before and not immediately after a meal. What reasons can you give for this? The room should be warm, about seventy to seventy-two degrees.

Have you ever bathed or watched a baby have his bath? If the mother had turned to you and asked, "Will you finish this for me?" what would you have done? Perhaps, like many other people, you have a dread of trying to handle a tiny, wiggling body. If you knew the procedure as the mother does you might find the experience a pleasant one. Of course the new baby will not be given a tub bath until he is two weeks old. Before that time he is made comfortable and clean by a daily sponge bath.

What is necessary for the bath? Your first thought is of the water required. For baby's comfort, this should be from ninety-eight to one-hundred degrees. Since that is much warmer than the room, the water should not be poured into the bathtub or basin until all the articles are assembled and everything is ready. Some mothers have found that an easy way to be sure that all is in readiness is to have a

bath-tray which will hold those articles needed for the bath. This list includes a mild castile soap, a box or cushion with safety pins, a dish with sterile oil for the day's use, tooth picks, absorbent cotton, a dish of weak boric acid solution or boiled water, and a paper bag for the waste. Near at hand, perhaps on a chair or table, there should be placed a soft towel, wash cloths, bath blanket, and the clean

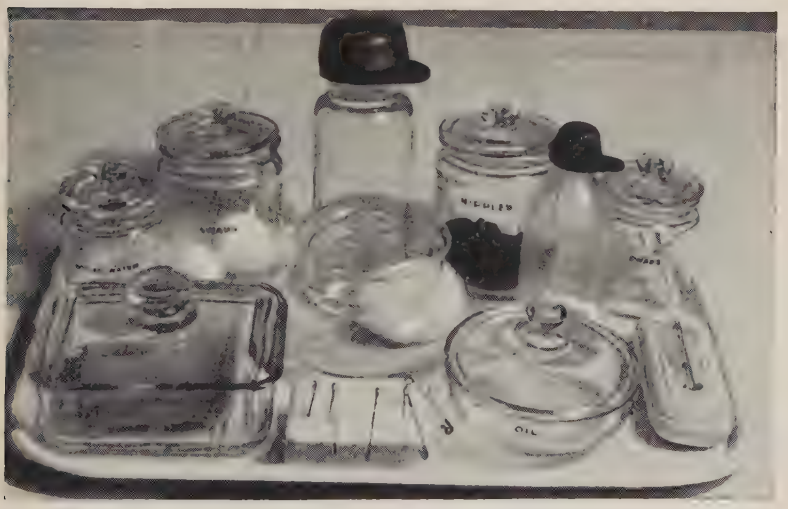


Fig. 113. A carefully-planned bath tray lightens work.
Courtesy of Maternity Center Assoc., N. Y.

clothing. A covered pail for the wet diapers and a hamper for soiled clothing should also be near by.

Before the baby is undressed, it is well to wash his eyes, ears, nose, and face. The baby's eyes should be cleansed with a piece of absorbent cotton, wet with boric acid solution or boiled water, which is gently wiped over the eye. This should be done for each eye, and a clean piece of cotton

used each time. If at any time any secretion appears in the eye, a physician should be called at once.

The baby's nose should then be cleaned very gently with cotton swabs on toothpicks dipped in sterile oil, or boric acid solution. Care should be taken not to irritate or scratch the membrane of the nose.

The ear canal should be cleaned occasionally by wiping any excess wax away from the opening. The cleaning of the inside of the ear canal should never be attempted. If the baby or child shows any signs of ear trouble, a physician should be consulted.

The baby's face should be washed in clean, warm water and carefully dried.

After undressing, with his clothing being taken off over his feet, the baby is ready for his tub. The head should be washed with a mild soap-and-water solution, using a soft cloth. The soap should be carefully rinsed off and the head should be dried with a soft towel. If scale or dandruff appears on the child's scalp, vaseline may be rubbed on gently at night and washed off with water and soap the next morning. This may be repeated as often as necessary, but a comb should never be used to remove the dandruff.

The body then should be rubbed all over with mild soap and water. Supporting the back and head of the baby with her left hand, and holding the ankles with her right hand, the mother should lower him gently into the water. She should continue to hold the body of the baby with the left hand, and with her right wash him very gently until the soap is all removed. She should then lift him from the water and pat him dry with a soft towel. After this a good, dry, non-irritating baby powder may be dusted lightly over him, taking care that the powder reaches all of the folds

and creases of the body. As the child becomes older, he can help himself more and have a part in the bathing process. However, the procedure remains much the same.

Fig. 114. This little lady is ready for her daily bath.

The dressing of the baby should be done as quickly and easily as possible and the clothing should be drawn on over the feet.

The Clothing Should Be Clean.—Clean clothing makes the child more comfortable and much more attractive. The infant and the pre-school child need daily changing of clothing. Though children must be allowed to play and become dirty, there should be regular times for bathing and changing the clothing. Soiled garments worn day after day establish low standards.

Sometimes mothers are careless about changing the baby's diapers and allow him to go several hours with a soiled diaper on. This is a direct menace to the health of the child, to say nothing of the discomfort afforded. During the day time the diaper should be changed whenever soiled. Unless he is ill, it is better not to change the baby during the night, for it may mean the establishment of the bad habit of bed wetting. Extra diapers may be placed on the baby before the last feeding. He then receives no further attention of this sort through the night. Every time the diaper is changed the baby should be carefully washed, dried, and powdered to avoid any chafing or irritation.

The Hands and Face Need Frequent Care.—Clean hands and face are very necessary to the comfort and appearance of the child. Some children always seem to have dirty hands and faces. A soft cloth, mild soap, and water are necessary and should be used as often as needed. The soap should be thoroughly rinsed off and then the washed surface carefully dried. When washing the face, care should be taken that soap does not get into the eyes. When washing the hands, the nails should be cleaned. The child should be taught early to wash his own face and hands when they are dirty; and as soon as he begins to assist himself at the toilet the "clean hands" rule should be taught of always washing hands immediately after caring for himself at the toilet.

Exercises.—A. Have a nurse or mother give a demonstration of bathing a baby. Outline her methods of procedure.

B. John is six months old. On his scalp a scale has appeared. What method shall his mother use to get rid of this scale?

C. Mary is three weeks old. Her sister has never bathed her but she wishes to do it for the first time. What method for bathing Mary can you suggest to her sister?

PROBLEM 6.—HOW SHOULD THE CHILD BE CLOTHED?

The Baby's Clothing Should Be Given Special Consideration.—Frequently in the moving pictures or in a spoken drama the coming of a baby is announced by depicting the mother at work on tiny garments. Have you ever noted the sympathetic reaction that the diminutive shirt or slip produced? People attach to baby garments much of the charm of babyhood. The expectant mother may have great joy in planning and making clothes that will seem lovely enough for the baby.

While there is much to be commended in this attitude, there is another phase to be considered. The primary function of the clothing is to protect the baby. In planning the baby's clothing, his well-being and comfort should be the first consideration. His clothes should be loose, light in weight, non-irritating and easily cleaned. The number of garments should be sufficient to keep the baby clean and attractive, and should be so made that the laundering will be simple.

The clothing of the baby is usually termed the "layette." Sometimes a mother makes the layette so elaborate and expensive that it would seen as if she regarded her baby as an object of display.

The first dresses and slips are usually made twenty-two inches in length and are used until the baby begins to creep,

Fig. 115 Layette made up of simple, inexpensive and easily laundered garments.
Courtesy Maternity Center, N. Y.

when he is changed to rompers. These rompers are made of colored gingham, chambray, or similar wash material.

The following layette is adapted from a list recommended by Dr. S. Josephine Baker. What additional articles have you known mothers to add?

6 over-slips or dresses
4 gertrude petticoats
4 shirts

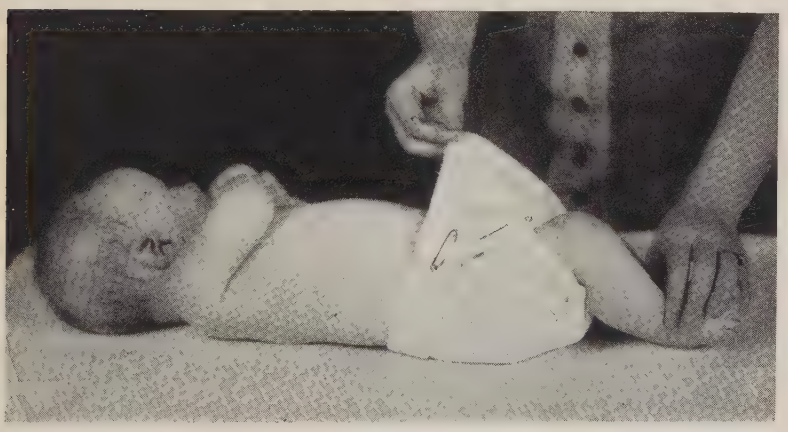


Fig. 116. Applying the square diaper.

3 abdominal bands for the first month
4 dozen diapers
4 night gowns
3 shirts
3 pairs soft merino hose
2 crocheted jackets or flannel sacks
1 cloak
1 cap
3 knitted bands

The Pre-school Child's Clothing Should Be Carefully Chosen.—What are some of the items which you think

should be considered in planning the clothing of the preschool child? Have you ever observed any little children who were unsuitably dressed? Why did you consider them so?

The materials for children's garments should be inexpensive, durable, and easily laundered. They also should be of smooth texture and comfortable to the skin, in order not to irritate or annoy the child. Perhaps you remember that at some time or other you had a *scratchy* wool dress or pair of hose which made you very uncomfortable whenever you wore them. Such constant annoyance has a harmful effect upon the child's disposition.

FIG. 117. A romper Miss Sue can don herself. Courtesy Bureau Home Economics, U. S. D. A.

Cotton materials which are easily washed and ironed are being widely used for children's garments. The clothing should be attractive to the child both in color and in style. You have no doubt enjoyed watching a little girl admire her new dress. How interested she was in the kitten or rabbit which was embroidered on the pocket! How she loved the dress because it was pink or because it was green! Too small consideration has been given to the child's preferences. With many mothers if the dress suits the mother it is regarded as the right garment for the child.

The Garments Should Permit Freedom of Movement.—Though the main purpose of children's clothing is to supply warmth and protection, it is not desirable that the child should wear a great amount of clothing. As a matter of fact most children wear too much clothing. Warmth does not depend upon weight, but upon the insulation of air held between the layers of clothing and in the meshes of their fabrics. Thus two light, loosely-woven layers of clothing

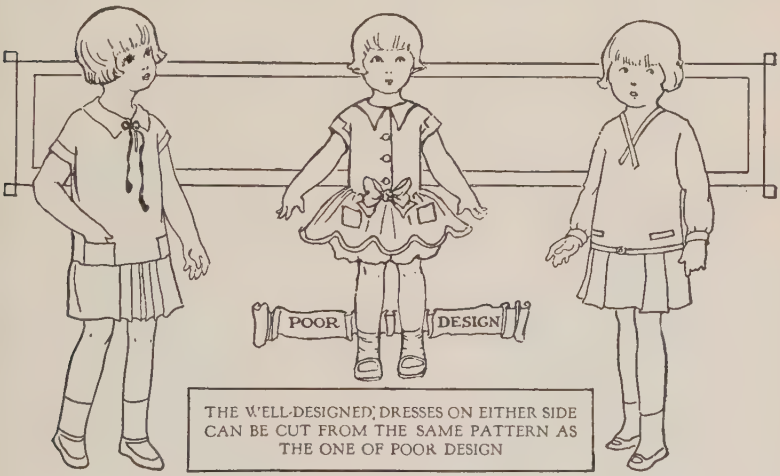


FIG. 118 Courtesy Bureau of Home Economics, U. S. D. A.

are warmer than one heavy layer. It is unnecessary to burden children and restrict their movement by heavy clothing.

The temperature and weather should be considered in clothing children. If the day is warm, even if the date is December twenty-fourth, the child need not be dressed as if it were twenty degrees below zero just because it is December. Extra clothing should be provided for outdoor play

and recreation, and the indoor clothing should be suitable for indoor temperatures.

The garments should be of such style and construction that freedom of movement is possible. This is true of both the day and night clothing. Any garment which restricts body movement should be discarded as unfit for the child. Frequently shoes are given small attention and are ill chosen. The toes should be broad and square and the size should be at least one inch longer and one-half inch wider than the foot. The soles should be flexible, and until the child is eight or nine years old, heels other than spring heels should not be worn. Rubbers and galoshes should be used in wet and cold weather so that the child's feet may be kept warm and dry.

Garments Should Be So Constructed As to Make Self-care Possible.—Have you ever taken a small child to the toilet only to be annoyed at the difficulty of getting his clothes unfastened? Have you ever spent ten or fifteen minutes trying to put a pair of overshoes on a youngster? If you have, you probably decided that clothing for children needed much improvement before it was convenient for anyone. We call a child helpless and sometimes scold and punish him for soiling his clothing, and yet do little in the way of helping him care for himself.

Some college girls, after working for several months with the children in a nursery school, decided that little of the clothing worn had been constructed with the self-care of the child in mind. This important item should be considered when planning the clothing for children. Buttons should be limited to the number absolutely necessary and should be so placed that the child can reach them easily.

The following *romper rules* are adapted from the bulletin

on Children's Rompers by Mary Alleen Davis, of the Bureau of Home Economics:

Cotton fabrics that will stand frequent washing and ironing are best for rompers. Of these fabrics, those whose

FIG. 119. A romper with front opening and drop seat that little brother likes. Courtesy Bureau Home Economics, U. S. D. A.

FIG. 120. A drop seat that makes self help easy. Courtesy Bureau of Home Economics, U. S. D. A.

weave permits the passage of the greatest amount of sunlight are favored.

Children over three years should have garments with a front opening to make self-dressing easier.

Collars are unnecessary on rompers.

If sleeves are used, raglan sleeves or kimono sleeves with a seam on the shoulder permit the greatest amount of freedom. In the summer rompers are better made sleeveless to permit greater exposure to sunlight.

There should be plenty of fullness over the chest.

The legs should be straight or should have loose bands. If the bands are used, the length should be determined by the measurement of the child's thigh five inches above the knee.

The blouse of the romper legs should be in the width, not in the length.

Buttons should be fairly large in size, and the buttonholes firm. It is a good plan to reinforce bands where the buttonholes are to be worked. The buttons should be sewed on firmly and have a long shank.

Garments to be ironed with a mangle should have closings heavily faced back on the side having the buttons, so that the buttons will sink into the cloth and go through the mangle without breaking.

The belt across the front and the belt on the top of the drop seat should be divided at the side seams so the front buttons will not have to be unfastened to drop the back.

Rompers should be generously long between the shoulder and crotch, and wide between the legs to assure freedom.

All points receiving strain, such as crotch seams, plackets, and pocket tops, should be stayed and double stitched.

The side-opening romper, and the triangular or oblong flat romper, are best suited to the diaper age.

The color and proportions of the garment should suit the child.

Direct Exposure to Sunlight Is Recommended.—If you have ever been in a large city you probably noticed the

numerous baby carriages that crowd the parks. The mothers have been told of the importance of sunlight, and faithfully wheel their babies out into the air every day. Sometimes the babies are very closely bundled, sometimes,

FIG. 121. A masculine sun suit. Courtesy Bureau Home Economics, U. S. D. A.

FIG. 122. An attractive sun suit for a little girl. Courtesy Bureau Home Economics, U. S. D. A.

though the face and hands are exposed to the air, the carriage hood is adjusted so they are protected from the rays of the sun. If the child is to profit by his outing, it is necessary that the mother understand clearly the difference in benefit

between sunlight and fresh air. Of course, fresh air is beneficial to the baby, but it in no way accomplishes what exposure to sunlight does.

Have you ever heard of ultra-violet light? Scientists have been able to take a picture of sunlight, or rather a picture of the length of rays that make up sunlight. They have found that sunlight is composed of various rays, some of which furnish heat; these are termed infra-red rays. There are others which furnish us with visible light and still others which are known as ultra-violet rays. The ultra-violet rays are those which enable sunlight to kill bacteria. This fact alone interests us in these rays. In addition to this they have a definite effect of increasing the resistance of a person to infection. Last, but not least, the ultra-violet rays have been shown to be an effective means of curing and preventing rickets. The amount of these rays in the sunshine varies at different times of the year, depending on several factors.

The height of the sun in the sky very definitely affects the amount of rays. Can you explain why? If the sun is sinking in the west, the rays must pass through a greater distance of our atmosphere and much of the ultra-violet light is removed. So a mother who wheels her child to the park to secure the benefit of the ultra-violet light for him will plan to expose him to the sun's rays near the middle of the day, but of course will guard him from sunburn. It is impossible to give the exact time, since the seasons also affect the quantity and intensity of these rays. For instance, in the northern part of the United States there is only one-tenth as much ultra-violet light in the noon-day sunlight of January as there is in that of July. Have you ever noticed how the smoke which hangs over a large city shuts out the sunlight? You will be interested to know that the part of

the sunlight that is shut out by dust and smoke is largely the ultra-violet rays. In some sections it has been found that as much as eighty-five per cent of these essential rays are screened out by the smoke, dust, and moisture that hang above a city.

Since there are so many factors that may lessen our ability to secure these health-giving rays, it is important that mothers understand what the sunlight really means to us, and how we can secure the magic gift. In order that the body receive benefit from the sunshine, the rays must shine directly upon the skin. Clothing and ordinary window glass alike screen out the rays that are health giving. Knowing this, many mothers have attempted to secure exposure to the ultra-violet light for their children by having them wear sun suits during the summer months. This is a wise measure. Other mothers follow a practice of having their children wear socks even in the winter months. If the wearing of socks is done from the middle of March to the middle of November for the hours in the middle of the day, the mother can expect the child to profit by the exposure. No doubt on a very cold afternoon you have seen a mother wearing a heavy fur coat and leading a bare-kneed child blue with the cold down a city street. The season, the time of day, and the place, alike make any benefit from such exposure highly improbable. Further, since the blood vessels are very near to the surface of the knees, exposure here means the loss of much heat from the body of the child and a chilling which may be a health hazard to him.

Exercises.—A. Plan a layette to cost not over $15.00.

B. Make a poster showing pictures of garments suitable for a three-year-old child.

C. Make a poster showing materials suitable for garments for the pre-school child.

D. Mr. and Mrs. A are expecting a baby. They have not a large income so they must plan carefully for their expenditures. They find that they can spend $35.00 for the baby's clothing. What will you suggest for the clothing for this baby?

PROBLEM 7.—WHAT CARE SHOULD BE GIVEN TO THE CHILD'S CLOTHING AND BED?

The Bed and Bedclothes Need Daily Attention.—Since the baby is helpless, there is a peculiar problem in the care of his clothing and bed. The mattress should be well protected with a rubber sheet, over which should be placed a quilt or comfort which can be washed easily. On this cover should be placed the sheets, blankets, and comforts. The bed should be aired daily for a short period and for an hour or two every one or two weeks. The lower sheet and underquilt will need frequent replacement. The blankets should be changed at least once a week and oftener if necessary to keep the bed fresh; top covers should be aired and sunned regularly and washed when soiled. There is no excuse for an unpleasant, foul-odored bed.

Care Must Be Taken in Laundering the Clothing.—The clothing of the baby should be laundered separately from the regular family laundry. Only a mild soap should be used and very careful rinsing should be done to remove all traces of the soap. The clothing of the older child may be washed with the regular washing, but care must be taken to use mild soap and to rinse thoroughly. The slips, dresses, and rompers of infants and little children are often badly soiled, and for this reason many mothers find it more satisfactory to wash the garments separately from the regular family laundry.

Diapers Require Special Care.—A wet diaper should never be dried and used again without washing. Harmful waste products are dried in the material, and when the

diaper is placed next to the warm, soft body these poisons irritate the tender skin.

All excreta from the bowels should be removed from the diapers, after which the diaper should be rinsed immediately. The diapers should all be washed in warm suds, boiled, rinsed, and, if possible, the drying should be done in the sunshine. The washing machine is very satisfactory for washing diapers as the boiling water can thus be thrown back and forth through the fabric. If squares of old soft linen or cotton are placed inside the diaper to receive the bowel passage, they can be burned and the washing of the diaper is made much easier.

Exercises.—A. Launder some garments for children.

B. Make rules for washing infant's clothing.

C. The Brown baby always has an unpleasant odor. You do not enjoy holding him. What care should be given a baby in order to avoid this unpleasantness?

PROBLEM 8.—WHY ARE THE COMMON DISEASES OF CHILDHOOD DANGEROUS?

The So-called "Children's Diseases" Should Be Considered Seriously.—If you were to make a list, what diseases would you include under "children's diseases"? You would probably write down measles, whooping-cough, chicken-pox, scarlet fever, mumps, diphtheria, and perhaps some others. People formerly regarded these diseases as necessary evils which children had to have at some time or other, and often assumed the attitude, "the sooner they have them, the better it will be."

This attitude has changed entirely, and parents no longer feel that their children must have these diseases. It is not customary now to expose children unnecessarily to them, for these diseases are considered as a very grave menace.

The After-Effects Are Often Dangerous.—These diseases, in a virulent form, are dangerous in themselves. While practically all of them have been directly responsible for the deaths of many children, the greatest danger lies in the after-effects, which are often extremely serious and dangerous. A large number of these diseases occur in a light form. Because of this, parents do not give sufficient attention to the care of the children at the time of illness, nor afterwards. Though some people consider measles a trifling disease, it is really one of the most serious diseases of childhood. Pneumonia, tuberculosis, and disease of the middle ear are some of its after-effects. Tuberculosis frequently follows whooping-cough, and chicken-pox sometimes leaves scars and disordered glands. Scarlet fever, even in its lightest forms, may leave serious heart disease, weakened kidneys, or defective vision and hearing.

Careful Medical Attention Should Be Given.—During the attacks of such diseases, even though in a light form, careful medical attention is necessary. Complications are more apt to follow a mild case which is neglected than a severe case which receives good care. Frequently, parents feel that because the child is not very ill, it is a waste of money to have a physician. This is an erroneous idea. The outcome of an infectious disease is never certain, and complications may arise at any period of the infection which may result seriously and which might have been prevented had proper care been given.

Children Should Be Protected from These Diseases.—No parent should knowingly expose a child to any infectious disease. Have you ever heard of a mother who did? What were the results?

Sound physical health is one of the best preventives of the development of disease, and every effort should be made

to create and continue sound conditions of health in the child. When a child becomes ill, he should be put to bed and isolated from other children. This should be continued until the nature of the disease has been determined. If it proves to be an infectious or contagious disease, the family should willingly and cheerfully submit to quarantine, thus doing their part to prevent the spread of the disease.

The community requires that children be sent to school. It should protect them, therefore, in every way possible from the ravishes of these serious diseases by excluding sick and exposed children, who may become carriers of the disease, until the period of infection is past.

The Home and Community Are Responsible for the Control of These Diseases.—The home is responsible for the control of these diseases through the maintenance of good health in its children. It is directly responsible for the establishment of those health habits which make strong bodies possible.

The community is responsible for the control of these diseases through its control of sanitary and hygienic conditions; especially through its rules of quarantine. The home should coöperate with the community in its warfare against these diseases, and should express disapproval of any failure to obey the laws.

Every child should be vaccinated for smallpox. The child should also be made immune to diphtheria by the toxin-antitoxin treatment. Science is perfecting similar measures for other diseases.

Exercises.—A. Have a physician talk to the class on the diseases of childhood.

B. Write a theme on the dangers of the common diseases of childhood.

C. List the method used in your community to control these diseases. How successful has community control been?

D. Get from a standard textbook (as Broadhurst's *Home and Community Hygiene*), or from your State Board of Health, the usual standards of quarantine for children's diseases. Compare with local rules.

E. Find out the latest facts on immunization prevention of children's diseases; on serums or vaccine treatments for such diseases.

F. Modern doctors recommend: "Wash your own hands before touching a baby!" In one family where older brothers and sisters are required to do this, the baby avoided all children's diseases. Explain the rule.

G. Alice, age six, had the measles. She was not extremely ill so her mother did not call a physician. She was not kept in bed and later a serious ear infection developed. Why was such neglect dangerous and also an example of extremely poor judgment?

H. Which words or phrases make the following statements correct?—

1. The expectant mother needs (a) well-balanced meals, (b) adequate rest and sleep, (c) plenty of exercise, (d) close-fitting clothing, (e) long auto rides to keep her in good health.

2. The young child should have a regular time for (a) food, (b) visiting, (c) bath, (d) sleep, (e) play, and (f) going to the picture show.

3. The best food for the baby is (a) cow's milk, (b) mother's milk, (c) potatoes and gravy, and (d) cocoa.

4. Foods which are added early to the diet are (a) orange juice, (b) vegetable juices, (c) meat, (d) strained cereals, and (e) cake.

5. Indications of good nutrition in a child are (a) standard weight, (b) no desire for daytime naps, (c) good color, (d) good appetite, and (e) sound sleep.

6. Food for children should be (a) cooked underdone, (b) unseasoned, (c) clean, (d) attractive, and (e) prepared very quickly.

7. In giving the child a tub bath the (a) face, head, and ears should be washed last, (b) the body should be rubbed all over with cold water, (c) the body should be wiped dry with a soft towel, and (d) the body should be dusted with a dry, non-irritating powder.

8. The baby's diaper should be (a) changed every hour, (b) changed as often as soiled, (c) used several times before washing, (d) washed as soon as soiled, and (e) thoroughly sterilized and sunned.

9. The pre-school child's clothing should (a) be elaborate, (b) permit freedom of movement, (c) be attractive, and (d) require infrequent laundrying.

10. Diseases which are dangerous for children are (a) whooping-cough, (b) measles, (c) chicken-pox, (d) mumps, and (e) scarlet fever.

11. Children's diseases are to be avoided because (a) they inconvenience the mother, (b) they may cause permanent injury to the child, (c) they may result in death, (d) it is unnecessary for children to have them, and (e) they keep friends and relatives away from the home.

Additional Problems and Exercises.—1. Plan a week's dietary for an expectant mother.

2. Plan a wardrobe for the expectant mother, not to exceed $50 in cost.

3. Make a bed for the baby out of a market-basket.

4. Make a comfort for a baby's bed.

5. What nursery equipment is needed for the new baby?

6. How shall this equipment be arranged and cared for?

7. Make a play dress for a four-year-old child.

8. Prepare some suitable desserts for the pre-school child.

9. Plan a week's menus for a five-year-old child.

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UNIT III

HOW THE CHILD DEVELOPS PHYSICALLY AND MENTALLY

Introductory Studies.—1. Find out from your mother at what age you cut your first tooth, sat alone, walked alone, talked.

2. How much did you weigh when you were born?

3. How long did it take you to double your weight?

4. What is the first event in your life that you can remember?

Presentation of the Unit.—One of the most interesting occurrences in nature is the growth and development of individuals. We grow and develop until in the middle twenties, and then we reach a relatively stationary period of physical development. However, mental development and the power to learn continue practically throughout life. Some body organs do not develop at the same rate as others, and although a person may obtain his growth in one respect, he may not in another. The period of growing may be divided into infancy, from birth to two years of age; pre-school, from two to five years; school, from five to twelve or fourteen; adolescence, from twelve to twenty or thereabouts; and adult life. During all this time, there will be both physical and mental development. Since we have time for considering only one period here, we shall study one which is very important and is perhaps the most neglected, remembering that the growth and development of the other periods proceed in a similar manner.

If you were asked which period of development is the most important in the life of the individual, what would be your reply? On first thought you might say the adult period, because we seem to spend such a long time in prep-

WEIGHT-HEIGHT-AGE TABLE (From Birth to School Age)

Height (inches)	GIRLS												BOYS											
	1 mos.	3 mos.	6 mos.	9 mos.	12 mos.	18 mos.	24 mos.	30 mos.	36 mos.	48 mos.	60 mos.	72 mos.	1 mos.	3 mos.	6 mos.	9 mos.	12 mos.	18 mos.	24 mos.	30 mos.	36 mos.	48 mos.	60 mos.	72 mos.
20	8	..	..	..	..	..	..	..	..	..	..	..	8	..	..	..	..	..	..	..	..	..	..	..
21	9	10	..	..	..	..	..	..	..	..	..	..	9	10	..	..	..	..	..	..	..	..	..	..
22	10	11	..	..	..	..	..	..	..	..	..	..	10	11	..	..	..	..	..	..	..	..	..	..
23	11	12	13	..	..	..	..	..	..	..	..	..	11	12	13	..	..	..	..	..	..	..	..	..
24	12	13	14	14	..	..	..	..	..	..	..	..	12	13	14	..	..	..	..	..	..	..	..	..
25	13	14	15	15	..	..	..	..	..	..	..	..	13	14	15	16	..	..	..	..	..	..	..	..
26	..	15	16	17	17	..	..	..	..	..	..	..	..	15	17	17	18	..	..	..	..	..	..	..
27	..	16	17	18	18	..	..	..	..	..	..	..	..	16	18	18	19	..	..	..	..	..	..	..
28	..	..	19	19	19	19	..	..	..	..	..	..	..	..	19	19	20	20	..	..	..	..	..	..
29	..	..	19	20	20	20	..	..	..	..	..	..	..	..	20	21	21	21	..	..	..	..	..	..
30	..	..	21	21	21	21	21	..	..	..	..	..	..	..	22	22	22	22	22	..	..	..	..	..
31	..	..	..	22	22	23	23	23	..	..	..	..	..	..	..	23	23	23	23	24	..	..	..	..
32	..	..	..	..	23	24	24	24	25	..	..	..	..	..	..	24	24	24	25	25	..	..	..	..
33	..	..	..	..	..	25	25	25	26	..	..	..	..	..	..	..	26	26	26	26	26	..	..	..
34	..	..	..	..	..	26	26	26	27	..	..	..	..	..	..	..	..	27	27	27	27	..	..	..
35	..	..	..	..	..	29	29	29	29	29	..	..	..	..	..	..	..	29	29	29	29	29	..	..
36	..	..	..	..	..	..	30	30	30	30	31	..	..	..	..	..	..	..	30	31	31	31	..	..
37	..	..	..	..	..	..	31	31	31	31	32	..	..	..	..	..	..	..	32	32	32	32	32	..
38	..	..	..	..	..	..	..	33	33	33	33	..	..	..	..	..	..	..	..	33	33	33	34	..
39	..	..	..	..	..	..	..	34	34	34	34	34	..	..	..	..	..	..	..	35	35	35	35	..
40	..	..	..	..	..	..	..	..	35	36	36	36	..	..	..	..	..	..	..	..	36	36	36	36
41	..	..	..	..	..	..	..	..	..	37	37	37	..	..	..	..	..	..	..	..	..	38	38	38
42	..	..	..	..	..	..	..	..	..	39	39	39	..	..	..	..	..	..	..	..	..	39	39	39
43	..	..	..	..	..	..	..	..	..	40	41	41	..	..	..	..	..	..	..	..	..	41	41	41
44	..	..	..	..	..	..	..	..	..	..	42	42	..	..	..	..	..	..	..	..	..	..	43	43
45	..	..	..	..	..	..	..	..	..	..	..	45	..	..	..	..	..	..	..	..	..	..	45	45
46	..	..	..	..	..	..	..	..	..	..	..	47	..	..	..	..	..	..	..	..	..	..	..	48
47	..	..	..	..	..	..	..	..	..	..	..	50	..	..	..	..	..	..	..	..	..	..	..	50
48	..	..	..	..	..	..	..	..	..	..	..	52	..	..	..	..	..	..	..	..	..	..	..	52
49	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	55

Prepared by Robert M. Woodbury, Ph.D., Children's Bureau, U. S. Department of Labor.
Weight is stated to the nearest pound; height to the nearest inch; age to the nearest month.

FIG. 123.

aration for adult life. Until recent years, the idea was quite general that grown-up people should be given the first consideration. Adults were served their food first, and children frequently waited until afterward for their meals. The rule that children should be seen and not heard was practiced. "It isn't necessary to consider the child," they said, "his day will come when he is grown."

But that attitude has entirely changed now, and we are living in the "day of the child." Some people feel that we have gone to the extreme in this direction, but whether we have done that or not, we are giving close attention to the child.

The psychologists and scientists who are making studies in child development tell us that the pre-school period, including infancy, is probably the most important, though it is the briefest. The fact that the pre-school period is only one-tenth or one-twelfth of the entire span of life has nothing to do with its significance.

Let us make a list of some of the reasons for the importance of this period.

1. The pre-school period is the period of rapid and intense growth.

2. It is the period in which the foundation of health, mental growth, and social adjustment is laid.

3. Malnutrition is greater at this age than at school age.

4. Many defects and handicaps, a great number of which are preventable, occur during the first six years of the child's life.

5. The pre-school child is highly susceptible to infection.

6. One-third of all the yearly deaths in our nation occur during the pre-school period.

Can you think of other reasons to add to the list?

Many mothers fail to realize the importance of this

pre-school period; hence children are more apt to be neglected at this time than at any other. It is very necessary, then, that mothers understand the fundamentals of health and growth of the child. Does this seem very difficult? The florist knows approximately for each kind of seed the time it will take for the first leaf to appear, the date of the first bud, and the time of flowering. Through this knowledge of the laws of plant growth, he is able to supply us with the poinsettia at Christmas, and the lily at Easter. There are similar laws for the growth of the child. His physical and mental growth proceeds in a definitely indicated manner. There is a normal time for each indication of development.

PROBLEM 1.—WHAT ARE THE INDICATIONS OF THE NORMAL PHYSICAL GROWTH OF THE CHILD?

Steady Gain in Weight and Height Is an Indication.—Probably the best method we have of deciding normal physical growth is by the steady gain in weight and height. Sometimes a child grows very rapidly in height without a like gain in weight. This is not considered a normal growth, and usually there is something wrong with his nutrition or other body processes. The mother should remember that the increase in height and weight are closely related, and one should not proceed long without the other.

Standards of normal growth have been determined through extensive studies, and tables may be obtained for both the pre-school and school child. For example, a boy twenty-five months old should be about thirty-three and one-fourth inches tall and should weigh about twenty-six and three-fourths pounds; a girl twenty-five months old should be about thirty-two and seven-eighths inches tall and should weigh about twenty-five and one-half pounds.

If a child is unusually tall or short for his age, it is better to use height and age for the basis than to use his age only. In using these tables it should be remembered that these figures are averages of the heights and weights of many children of different types and nationalities, and that a child may vary seven per cent below the average, or ten to twenty per cent above the average, before he should be considered abnormal in his development.

In order for a mother to have definite knowledge concerning the growth of her child, she should keep a growth record. He should be weighed every two weeks during the first year, and after that once a month. His height should be measured every three or six months. Height and weight tables and growth record charts may be obtained from the Children's Bureau at Washington, D. C., or from the State Department of Public Health at the capital of your state.

Certain Muscular and Skeletal Control Is an Indication.—If you have watched a baby develop you have noticed how gradually he gains control of his muscles and frame work. At first his arms and legs are often moving irregularly in all directions. Soon he learns to reach for an object and hold it. Later he is able to put his toe in his mouth; soon he is pulling himself up to a chair; and then, before long, he is walking. A child who lies very still and makes no effort at the exercise that leads toward controlled movements is not developing normally.

Generally speaking, the normally-growing child holds his head erect at four to six months, rolls from his back to his stomach at four to six months, pushes with his feet at four months, sits alone at six to nine months, and walks alone at twelve to eighteen months. He puts on his shoes at twenty-four months, and is able to tie them at five to six

years. He washes himself at three to five years and buttons his clothes at four years. These are all definite indications of his physical growth. This is not a complete list, of course, but it includes some of the most common learned activities.

FIG. 124. Plate showing deciduous teeth. Note especially those of the lower jaw. Courtesy of Army Medical Museum.

Anyone with a child to watch will find it interesting and also profitable to keep a diary of his development.

The Eruption of Teeth Indicates Growth.—Parents and friends are usually eager to discover the first tooth in the baby's mouth, and when the discovery has been made, there is much rejoicing and excitement. The appearance

of this tooth is another indication of growth and it too has its normal time for appearing.

The two central lower incisors, which are the two central cutting teeth on the lower jaw, appear at four to six months.

The upper incisors appear at eight to twelve months.

The other two lower incisors appear at eight to twelve months.

The first molars, or grinding teeth, appear at twelve to fifteen months, one on each side, above and below.

The upper and lower canines, frequently called the eye and stomach teeth, appear at eighteen to twenty-four months.

The second four molars appear at twenty-four to thirty months.

The third four molars, called the "six-year molars," which are the first permanent teeth, appear at five to six years.

The next set of permanent molars appears at twelve years and the last set, commonly termed the wisdom teeth, appears at about eighteen years of age.

The child normally loses all of his baby teeth between six and twelve years.

Sometimes children are very late in cutting their teeth. When this occurs, the cause may be traced to a lack of bone-building minerals in the mother's diet during pregnancy, or to the food of the child during infancy.

Good Health Is an Indication.—Why is good health an indication of the child's physical growth? A healthy child is a normally-growing child. He has a good appetite and color, is active, and sleeps soundly. He is contented in spirit and generally happy. You need never ask a little child if he feels well, for he tells you that by his appearance and actions.

Exercise.—A. Betty is two years old. Her parents are very much interested in her growth and development. How can they know if Betty's physical growth is normal?

PROBLEM 2.—WHAT ARE THE INDICATIONS OF THE MENTAL GROWTH OF THE CHILD?

Physical and Mental Growth Generally Proceed Together.—When the child develops physically and not mentally, or when he grows mentally and not physically, his development is not normal. Formerly it was thought that mental growth meant small physical growth, and that a high mentality always accompanied a weak body. Science has proved the error of such belief.

We know now that the physical and mental growth of the child go hand in hand. For each period in physical development there is a corresponding stage in mental development. Twelve to eighteen months, the normal time for the child to walk alone, is also the normal time for the child to learn to say his first three or four words.

It is very difficult to make a distinct separation of physical and mental growth because they are so closely related. Most of the indications of physical development may be likewise indications of mental development. Eruption of teeth, muscular control, and all motor activities may be indicative of both mental and physical growth.

Certain Indications of Mental Development Should Occur at a Given Age.—Just as parents are interested in the indications of the physical growth of their children, so they are interested in knowing the specific indications of mental growth. Specialists in pre-school child psychology say that low mentality may frequently be discovered in children at an early age.

Some studies show that the following are indications of

normal mental development in children. Try to observe a young child for these indications and report your results to the class:

At six to nine months the child says "ma-ma," "ba-ba," or equivalent syllables.

Fig. 125. Simple things give interesting employment.

At nine to twelve months he reaches for the baby in the mirror.

At twelve to twenty-four months, he repeats two or three syllables.

At eighteen months, he looks at pictures.

At twenty-four to thirty-six months, he names parts of the body, objects in a picture, and knows his name.

At thirty-six months, he asks questions of older people.

At forty-eight months, he knows money is for purchase, names two colors, and folds paper diagonally.

At sixty months, he names four colors, distinguishes right from left, and tells own age correctly.

When a child is retarded in his mental development, the parent should seek the help of a specialist. Normal mental growth is not a result of heredity entirely. Often a defect is due to some condition that can be set right. Should examination disclose that the defect cannot be remedied and that the child is a mental defective, steps should be taken

early to place him in an institution established for the care and training of such cases. Why is this recommended?

Interesting Studies on the Mental Growth of Children Have Been Made.—Perhaps you have been wondering how the scientists have learned about the mental growth of the child, since it is so difficult to study and to measure. It has been done by directly studying and measuring a large number of children. These studies are still being carried on in various parts of the United States, and every day more is being added to our knowledge of the pre-school child.

Dr. Gesell at Yale University observed several hundred pre-school children for an extended period of time, and by means of his studies has obtained much definite information regarding standards or norms of development. He has developmental charts or schedules for one to three months, four months, six months, nine months, twelve months, eighteen months, two years, three years, four years, and five years. These may be found in his book called, "The Mental Growth of the Pre-school Child." Dr. Terman at Leland Stanford University made an extensive study of gifted children, by which he meant unusually intelligent children. Nearly two thousand children were involved in this study. His findings with this group of children show the following trends:

1. Gifted children weigh more at birth—the average difference being three-fourths of a pound.

2. Gifted children learn to walk one month earlier than the average child, and to talk about three and one-half months earlier.

3. Gifted children show superior ability at a very early age.

4. Gifted children are in much better health and physical condition than the average child.

5. The gifted child of nine years knows more about plays and games than the average child of twelve.

Of course, you understand there were exceptions to the observed "trends" in his study, but these findings held true for most of the children in the group.

These studies and many similar ones help us to understand better the growing child and enable us to make possible the conditions which are best for his development.

Exercise.—A. Jerry is five years old. His parents are interested in his growth and development. How can they know if Jerry's mental growth is proceeding normally?

PROBLEM 3.—HOW MAY THE CHILD BE AIDED IN THE FORMATION OF GOOD HABITS?

Have you ever heard statements similar to these, "Man is a creature of habit," or, "The child is a bundle of habits"? What is meant by such statements? These are merely different ways of expressing the importance and influence of habits. What is meant by a habit? If you were to turn to the term in your dictionary you would find a definition something like this, "a habit is a tendency toward an action which by repetition has become easy to do, spontaneous or even unconscious."

You may have a habit of speech, a habit of study, or a habit of courtesy that characterizes you. Perhaps your friends readily recognize your voice or your footstep because you habitually speak or walk in a certain manner. Beginning with your waking in the morning, list the activities that you have done so often that they have become "easy to do, spontaneous or even unconscious."

Because so many of these activities have become "spontaneous or unconscious" they require no special attention except to start them. You are able to dress yourself, hum

a tune, and observe activities on the street all at one time. A two-year-old child can only do one of these things at a time. He must give it his close attention. Habit has not made these processes mechanical with him. Do you see what a large part habit formation may have in your progress?

Habit Formation Is of Great Importance.—This has been stressed by James* in the following statement: "The hell to be endured hereafter, of which theology tells, is no worse than the hell we make for ourselves in this world by habitually fashioning our characters in the wrong way. Could the young but realize how soon they will become mere walking bundles of habits, they would give more heed to their conduct while in the plastic state. We are spinning our own fates, good or evil, and never to be undone. Every smallest stroke of virtue or of vice leaves its ever so little scar. The drunken Rip Van Winkle, in Jefferson's play, excuses himself by saying 'I won't count this time!' Well! he may not count it, and a kind Heaven may not count it; but it is being counted none the less. Down among his nerve-cells and fibres molecules are counting it, registering and storing it up to be used against him when the next temptation comes. Nothing we ever do is, in strict scientific literalness, wiped out. Of course, this has its good

FIG. 126. Thumb sucking beginning so early is difficult to stop.

*James, William, *Habit*, Henry Holt and Co., N. Y.

side as well as its bad one. As we become permanent drunkards by so many separate drinks, so we become saints in the moral, and authorities and experts in the practical and scientific spheres, by so many separate acts and hours of work."

Habit formation begins as soon as the child is born, and proceeds so rapidly that it is difficult to distinguish between those things that a child of one year instinctively does and those things which he has formed the habit of doing. Since childhood is the most easily influenced period, it is essential that the right kind of habits be established in these early years.

There Are Two Important Laws of Habit Formation.—Psychology has given us two laws of habit formation. These are called the law of exercise and the law of effect. The law of exercise means that a habit is formed through repeating an act; the law of effect means that a habit is formed much more readily when an act gives the individual pleasure, so that he likes to do it and to do it again. The fact that a habit may be formed in a young child when he has repeated the act no more than three times illustrates very well the law of exercise. Have you ever known a child who had learned to walk very well to be so ill that he was confined to his bed for a long period? On his recovery it was necessary for him to relearn to walk. The lack of exercise of this habit resulted in its loss.

Have you ever picked up a rattle that the baby had tossed to the floor, only to have it thrown again and again? The child had pleasure from your attention and from the jingle of the rattle and soon formed the habit of throwing it.

Habits Formed in Childhood Have Far-reaching Effects.—There is an old adage which runs something like this, "Let the child run until he is six, and you never catch him."

There is also a group of people who say, "Give us the child the first seven years of his life, and you may have him the rest." These statements voice the far-reaching effect of habits formed in childhood. Frequently you hear adults say, "I just can't do this or that, because I never formed the habit when I was young," or, "I do this because we always did it at home," thus indicating the influences which their home habits have upon them.

The years before nine are the most important in which to establish good physical habits. For this reason, the health program has been taken over by the elementary schools. Which of your habits were formed before you went to school? Which were formed after you started to school?

Bad Habits Should be Prevented.—Habits are so easily formed and are broken with such difficulty that the prevention of bad habits is one of the responsibilities of the home. From the beginning of the child's life, bad habits must be watched with care. Crying at night, irregular feeding, bed wetting, thumb sucking, outbursts of anger, and dishonesty are among these undesirable habits. Children frequently become serious social problems as a result of habits formed early in life.

Many of the bad habits formed by children are due to the indifference of parents who pay little attention to the child's development. Many times a habit which gives pleasure to the child may be substituted for the undesirable one. For example, a three-year-old child who had a habit of putting buttons and hooks in his mouth was shown a brightly colored box and began a game with his mother that every button and hook found should help fill the box. The result was the substitution of a good habit for a dangerous one.

Good Habits Should Be Encouraged.—Sometimes parents expect children to form habits merely by telling them to do a thing. Frequently you hear a mother say, "Now be good," "Don't be noisy," or, "Be a nice boy." Such attempts at habit formation are useless. What is meant by "Be good," or "Be a nice boy"? These commands too often mean, "Don't bother mother." Neither the mother nor the child understands just what is to be done. Lacking understanding, the child has no basis for forming a habit and has no incentive to lead him. Good habits cannot be produced this way.

When the formation of a good habit is desired, the child should know exactly what is to be done, opportunity for repeating should be given, and some pleasurable effect should be associated with the doing. Children should be commended for their good acts. Through encouragement, children may be led to continue desired practices until they are established as habits.

Exercises.—A. Make a list of desirable habits which should be developed in the young child.

B. Make a list of undesirable habits whose development you would seek to prevent.

C. Lucy is three years old and will not go to bed unless her mother goes with her. If any other plan is tried she screams and yells and makes quite a scene. How do you suggest that her mother handle this problem?

PROBLEM 4.—HOW MAY PROVISION BE MADE FOR THE MENTAL AND PHYSICAL GROWTH OF THE CHILD?

Opportunity for the Best Mental and Physical Growth Should Be Provided.—You have been studying the indications of the physical growth of the child and also how the child's mind develops. You will now consider how provision may be made for such development.

You have already learned what important factors heredity and environment are. Opportunity should be provided for a child to grow and develop mentally and physically to the limit of his inheritance. Although there is still much to be learned about what really constitutes a satisfactory environment for the normal mental and physical growth of the child, certain tentative standards have been established which serve as a guide to the parents.

Wholesome and Adequate Food Should Be Provided.—All studies of the growth and development of the child indicate the necessity of wholesome and adequate food for him. What body-needs must the food that is eaten meet? List the foods that will meet each need. Which food-need increases the most rapidly as the child grows? Why is the rule, "Two leafy vegetables each day," a good one?

Both parents are equally responsible for the provision of proper food, and for the establishment of good food habits. It is just as necessary that the father know something of food values as it is that the mother be informed. Sometimes parents have not discussed and agreed upon the dietary which the child shall receive. Perhaps when the mother insists upon cereal or egg being eaten the father argues, "Oh, let him eat what he wants. I never liked that either." If such disagreement occurs very many times, what will be the effect upon the child's food habits?

Provision Should Be Made for Exercise and Play.—Have you ever watched a tiny baby when he is free from covers? His arms and feet make many motions that have apparently no purpose. It has been said that kicking and crying are the first two rights of childhood. Upon these the little baby is dependent for his exercise. When he is older he insists on his next right—the right to creep. This affords excellent exercise for his entire body, develops his lungs, and

gives him muscular control. When he is old enough to toddle (one year to two) his activity increases. He is going somewhere or doing something most of his waking hours. The unexplored territory of the house and play-yard holds almost enough interest for his day. A ball, a box of painted wooden blocks (too large to be swallowed), a rubber doll, and a duck on wheels add all that is necessary for his play-time.

From the period of two years old, provision for exercise and play become increasingly important. Why is this true? It has been said, "In their play they learn to observe quickly, to judge, to weigh values, to pick out essentials, to give close attention; they learn the value of cooperation, to recognize the rights of others as well as to insist upon their own being recognized. They learn the meaning of freedom through laws, they learn the value and function of work and the joy of accomplishment. A child who does not play not only misses much of the joy of childhood but he can never be a fully developed adult. He will lack in many of the qualities most worth while because many of the avenues of growth were unused and neglected during the most plastic period of his life."* The provision that is made, then, for exercise and play should not only furnish ample outlet for physical energy, but should, through simple toys, enable the child to reconstruct a little world about him that will interpret to him the great world outside. By playing *store*, *horse*, and other similar games, he interprets his idea of his environment. What toys and equipment will best enable the child to receive this early education and development through his play? How shall these toys be chosen?

Just as we have measurements for tables or beds, stand-

*Norsworthy and Whitley, *Psychology of Childhood and Adolescence.*

ards have been established for toys. The points of a good toy may be listed as follows:

1. It is simple; so constructed that it cannot injure the child physically.

2. It is durable; so constructed that it will stand hard wear.

3. It can be easily cleaned.

4. It interests the child and enables him to learn many things through its use.

5. It is attractive; so shaped and colored that it will add to the child's appreciation of the beautiful.

What toys would these rules lead us to avoid?

1. The intentionally ugly toys. What examples of this type of toy can you give? The snake in the box, the policeman with distorted hands or feet, and the hideous doll with the "goo-goo" eyes are common examples.

2. The *too complete* and expensive toys. Perhaps you have seen a toy automobile complete with horn, lights, and license plate, with glass wind shield and extra tire. What incentive except pride in ownership would this toy bring? A simple automobile which the boy himself helps paint is much more valuable.

3. The look-on toy; the toy that can only do one thing over and over again, while the child stands back and watches it. Such a toy increases the child's destructive impulse by making him wish to see what makes it go. It seldom aids a child to understand his world. What mechanical toys of this type have you had in your home? How long did they usually last?

Sufficient Sleep and Rest Should Be Made Possible.—If mental and physical growth are to proceed normally the child should have adequate sleep and rest. What is adequate sleep and rest for a child? How does the amount neces-

Minimum List of Play Equipment

Suggested by the Department of Child Welfare and Euthenics
Kansas State Agricultural College

Birth to 1 year	1—2 years	2—3 years	3—4 years
Bright colored rubber balls	Kiddie Kar	Laundry set	Garden tools
Rubber or strong celluloid doll	Heavy iron or wooden car or wheelbarrow	Tub	Horizontal bar
Tinkertoy doll or animal	Small chair and table	Wash-board	Wooden or iron rings
Hard rubber teething ring	Swing	Ironing board	Play-house
Strong celluloid rattle	Teeter-totter	Iron	Dump truck, tractor, or some larger iron car
Bell	Sand box and sand toys (shovel, pail, spoons, cups)	Broom	Paints and brush
Bright colored ribbons	Building blocks (very few)	Dust-pan	Larger doll
Spool on a string	Boards on which to walk	Dust-mop or carpet sweeper	Toilet set
Spoons	Pull toys	Set of china dishes	Set of larger dishes
Kettle lids	Balls—large, bright colored; small and hard; and soft	Aluminum cooking utensils	Simple car or train to build from wooden parts
Pans	Doll	Doll bed	Blackboard
Boxes with hinged doors, or separate covers	Blanket or comforter for wrapping doll	Doll trunk	Animals—wood or stuffed
Wooden box on casters	Large wooden beads and laces	Doll clothes	Telephone
Cup	Peg board or marble board	Doll carriage or some vehicle for conveyance	Iron bar about four feet from the ground
Chair	Aluminum or enamel dishes	Blackboard	Iron or wooden rings 6″ in diameter suspended from tree or bar
Clothes pins—fork shaped	Stuffed animal (blanket cloth) or soft doll	Large crayons	Large wooden boxes
	Nested blocks	Library paste	
	Molding clay	Blunt scissors	
	Large crayons	Plain and colored paper	
		Pictures	
		Tinkertoys	
		Tricycle	
		Carpenter tools—hammer, saw, boards, nails	
		Wagon	
		Iron cars	
		Building blocks	
		Wooden boxes—varying sizes	

sarily change as he grows older? These questions arise in planning for the child's welfare. The results of a recent study* made on the time actually spent in sleep by children under six are given in the following table:

Average Duration of Sleep at Different Ages*

Age	Total Sleep	Nap
Under 18 months	15.08 hours	2.65 hours
18–24 months	13.33 hours	1.86 hours
2–2½ years	12.81 hours	1.68 hours
2½–3 years	12.81 hours	1.58 hours
3–3½ years	12.56 hours	1.85 hours
3½–4 years	12.43 hours	1.55 hours
4–4½ years	11.95 hours	1.23 hours
4½–5 years	12.01 hours	1.40 hours
5–5½ years	11.71 hours	2.71 hours
5½–6 years	11.00 hours	.95 hours

*Flemming, Bernice, Master's thesis, Kansas State Agr. College

The hours actually spent in sleep by these children approximated the hours recommended by several leading authorities on child development.

To secure the sleep and rest essential, the child should go to bed at a stated time; he should have his nap regularly. The room should be comfortable, quiet, and well ventilated. From the beginning he should sleep alone. He should have regular night-clothing and a warm bed with not too heavy-weight bedclothes. Everything possible should be done to bring about restful sleep which is so necessary to the development of the child.

All Remediable Defects Should Be Corrected.—Sometimes the growth and development of a child is retarded because of the existence of some defect which can be remedied. Enlarged and diseased tonsils, adenoids, infected

teeth, defective vision, and defective hearing are included in the list.

Bad tonsils and adenoids obstruct breathing, and may sometimes harbor infection. Adenoids develop mouth-breathing, and, if very extreme, may ruin the shape of the face. Infected teeth are directly harmful to the body because of the poison they send out in the blood.

In all of these conditions, a physician should be consulted and everything possible should be done to correct them. Many a child has been thought stupid and dull when all that he needed was a pair of spectacles or to have his adenoids removed.

Very careful attention should be given to the teeth of the child. The baby teeth should be filled whenever a cavity appears, just as should the permanent. Many of the serious diseases of adult life are caused by the neglect of teeth in infancy and childhood.

Exercises.—A. Assemble suitable toys for a baby and for a young child for class discussion.

B. Plan indoor and outdoor games for young children.

C. Plan an exhibit showing toys of your mother's time and those of today.

D. Work out the principles that underlie the construction of modern toys.

E. Arthur, aged four, is underweight, is gaining little, and is very nervous. He does not romp and play as other children do. His parents have allowed him to eat and sleep as he chose. What can his parents do to provide for better mental and physical growth in him?

PROBLEM 5.—HOW MAY THE MORAL AND SPIRITUAL NATURE OF THE CHILD BE DEVELOPED?

Is the moral as important as the mental? As the physical? Are mental, physical, and moral qualities each separate from the other?

The Small Child Is a Non-moral Individual.—What do we mean by such a statement? We use the term to describe the little child because he does not know the difference between right and wrong, and does not understand how to choose between them. He is not responsible for what he does, and he has no basis of choice or standards for conduct. He is little interested in the welfare of the group at any time, and none at all when it interferes with his own desires. These qualities in his nature should be fully understood so that too much is not expected of the child in the way of moral responsibility. At what age does the child have an understanding of right? By five years or earlier? What makes a right thing right? A wrong thing wrong? Does it harm the doer? When? Does it harm others? How many others?

Certain Moral Qualities Should Be Developed in Every Child.—To ignore these important moral qualities and to make no effort to develop them is a mistake. If the child is to grow into a morally responsible citizen, this part of his nature must be trained.

The sense of right and wrong must be developed in him. He must be given training which helps him to reason and make choices in the matters of right and wrong. He must be given help in setting up and choosing his standards of conduct, and must come to realize his own responsibility for his conduct. Honesty, truthfulness, loyalty, fair-mindedness, reliability, and consideration of others are some of the most important moral qualities which every individual needs. Moral qualities are not inherited. They are acquired and come by the way of environment and determined effort, and it is through their development that the unmoral child changes to an individual with a definite moral responsibility.

Physical Defects and Poor State of Health May Have an Undesirable Effect.—We have already learned in this unit how closely the mind and the body are related and how good health is conducive to both mental and physical growth. That there is a close relationship between bodily and moral conduct is beginning to be generally believed. Many authorities say that the best foundation upon which to build moral responsibility is that of the health of the people.

Many teachers report cases in which bad or uncontrollable children have been changed into law-abiding school citizens when some defect had been removed and their health brought to normal condition. Have you ever noticed how irritable and cross you are when you are tired and how difficult it is for you then to make wise decisions?

Perhaps you have heard the story of a boy who played hookey, smoked, swore, lied and was considered the worst boy in town. A school examination revealed that he could see only one-fourth as well as the average child. When he was fitted with glasses, he changed completely and after a time stood at the head of his class, a highly-respected boy.

In another city, a physical examination upon a group of children who were habitual truants showed that only three of the one hundred and fifty were without some physical defect. All of these facts make us realize the importance of good health to the child.

Careful Training and Encouragement Are Aids.—Desired moral qualities do not come by chance; there must be both direct and indirect training for them. The child must be given concrete examples of right conduct, and opportunities to make choices for right and wrong. If parents always make the decisions for the child, they will never train him to decide for himself.

The child is a great imitator and may be influenced by

associates, stories, and the suggestions of others. The same laws of habit formation, the law of exercise and the law of effect, cited for mental training, hold in the training of moral qualities. If the child is to be encouraged in developing certain traits he should be given satisfaction of some sort when he is truthful, obedient, helpful, and self-controlled. He should also be given opportunity to practice these traits.

The home has a great responsibility in training the moral nature of the child. Through the home, he will receive much of his idea of honesty. This is perhaps best developed through his understanding of property rights. Every person in the home, even the smallest, should have a nook, corner, or box sacred to his own use which is not to be touched or examined by anyone without his permission. Very early the child should learn to insist upon respect for his rights and to refrain from meddling with other persons' affairs. The idea of *mine and thine* is thus instilled in the child.

The child whose mother allows him to play with forbidden toys in his brother's absence is not receiving training in honesty. Accepting an inaccurate statement of facts from a child is not teaching honesty or truth. The child whose parents solve his arithmetic problems, or write his compositions, deceiving his teacher, is not receiving training at home for honesty. A child should have high moral standards developed in him from the beginning of his early life if he is to be a strong, responsible citizen. We can scarcely expect the moral standards of any nation to be higher than those set up by the homes. Where else does a small boy or girl build moral habits? Can the home control to some extent standards in the play group? How?

Proper Social Life is Essential to Moral Development.— If a child has no companions and fails to learn very early in life how to get along with others without quarreling, he

is not making proper social adjustment. He does not fit in as a member of a group. He is missing the *give and take* so common in life. When he is grown, it will be difficult for him to work with other people, or to become a satisfactory member of a group.

The Child's Spiritual Development Should Be Considered.—Frequently parents are so busy providing for the material needs and wants of the child that they forget there is another side to be considered. Man, to be well balanced, must have some development of his spiritual nature. He needs a wholesome outlook on his whole life situation and a reverent, coöperative regard for his fellow man, for nature, and for God.

This attitude should be developed in the child. He should be helped to see that the world is part of a great, wonderful, moving universe and that all nature is beautiful. He should be given opportunity to learn the meaning of love in its broadest sense. He should be taught reverence for sacred things, the value of friendship, and the power of God. Through this training will begin the development of his spiritual nature.

Exercises.—A. List the moral qualities which should be developed in every child.

B. Outline means and methods by which this can be done.

C. Yesterday Teddy, aged four, took an apple from a neighbor's table. When his mother talked to him about it she found that Teddy did not know that he was doing wrong. Why did he not know this was wrong? How could he be made to understand? Why not let Teddy do this without paying any attention to his action?

Objective Tests.—Can you supply the words which make these statements correct?

1. The period of growing is divided into ————, ————, ————, and ————.

2. One-third of all the deaths in our nation occur during the ———— period.

3. Some indications of the normal physical growth of the child are ————, ————, ————, and ————.

4. Each period in the physical development of the child has a corresponding stage in ————.

5. A habit is formed through ———— the act.

6. A habit is formed much easier when the act gives the person ———— in doing it.

7. Good acts in children should be ————.

8. Growth in a child may be prevented by ———— which can be corrected.

9. The sense of ———— and ———— must be developed in the child.

10. The child should be taught ———— and ———— for God.

11. The well-being of children, mental and physical, is a concern of both the ———— and ————.

12. A good foundation for moral training in children is made by ————.

Additional Problems and Exercises.—1. Make a chart showing the steps in physical and in mental growth in the child during the first two years.

2. Observe a young child for several hours, recording his activities and conversation.

3. Visit a baby clinic or day nursery and report your observations for class discussion.

4. Try to teach and help a child to form one or more definite health habits. How did you use the law of repetition for exercise? the law of effect?

5. Have a dentist talk to the class about teeth and their care.

6. What health habits should a young child form?

7. Why should all remediable defects be corrected early in the child's life? What are the principal remediable physical defects?

8. Have a physician talk to the class about methods of caring for remediable defects.

9. Name a mental fault that seems to you remediable. How did it get started?

Suggested Bulletins and Leaflets for Teacher and Student:

"Backyard Playgrounds." Folder No. 2, Children's Bureau, U. S. Dept. Labor, Washington, D. C.

"Child Mentality and Management." Outlines for Study. September. No. 2 from Child Care and Child Welfare, Prepared in coöperation with the Federal Board for Vocational Education. No. 91. (Obtainable only from the Superintendent of Documents.) Children's Bureau, U. S. Dept. Labor, Washington, D. C.

"Growth Work for 4-H Club Members." Rhode Island Agr. Ext. Bul. 42:1–8, Kingston, R. I.

Klein, Armin (M.D.) "Posture Clinics; organization, and exercises." No. 164. Children's Bureau, U. S. Dept. Labor, Washington, D. C.

Klein, Armin (M.D.) and Thomas, Leah C. "Posture Exercises; a handbook for schools and teachers of physical education." No. 165. Children's Bureau. U. S. Dept. Labor, Washington, D. C.

"Mental Tests for Growing Children." Woman's Home Companion, N. Y. C.

"References on the Physical Growth and Development of the Normal Child." No. 179. Children's Bureau, U. S. Dept. Labor, Washington, D. C.

Thom, D. A. (M.D.). "Habit Clinics for the Child of Pre-school age; Their Organization and Practical Value." No. 135. Children's Bureau, U. S. Dept. Labor, Washington, D. C.

Smith, E. F. Colo. Agr. Ext. Bul. 231a:1–11, 1925, Fort Collins, Colo.

"Worms, Constipation and Bed-wetting." Woman's Home Companion, N. Y. C.

UNIT FOUR

THE EDUCATION AND TRAINING OF LITTLE CHILDREN

Introductory Studies.—1. Make a list of poems memorized before you were ten years and a similar list for after ten years. Compare these lists.

2. Write a paragraph on the imagination of little children.

3. Observe a child for an hour or more, noting what arouses his curiosity.

4. What music did you most enjoy as a child?

Presentation of the Unit.—Have you ever known a mother to be more concerned over the making of a new and attractive suit for her child than she was in training him in self-control? Why do you suppose her interest was expressed in this way? Did she not love the child? Probably she knew nothing about the importance of training the child in this early period and despite her deep affection did not understand her responsibility.

Love for our children is implanted deeply in our nature, but love alone will not tell us how to train them or what to do when difficulties arise. Love should, however, make us eager to learn all we can about training them properly and giving them sufficient opportunity for their development. Since there is no other period so important in the training of the child as the first six years of his life, our efforts to secure opportunity for them should begin very early. Have you ever known parents to have difficulty with the training and management of their pre-school children? Most of these cases occur because the parents do not understand the needs of their children. Sometimes parents find their

children uncontrollable at the age of two years. What do you think of such a situation? Have you ever known a mother who could not manage her two-year-old child?

FIG. 127. Putting on rubbers.
Courtesy of D. Warren Boyer through permission of *Children*.

Perhaps you have heard her say, "I have punished her and punished her and it does no good." Many parents do not understand the use of punishment, and punish only when they are angry.

If we would do the most for our children we must learn more about their nature and activities, and more about ourselves. The child is a great imitator, and receives his training largely through unconscious observation and imitation of adults and other children about him. All of the child's activities should be considered as a means of his training. It is only as we make wise use of these normal interests and activities of the child that the best development can come. How this can best be done is the parents' problem. Among the interesting suggestions given for their help are Dr. Thom's "Don'ts for Parents":—

1. Don't be over-solicitous.
2. Don't baby your children too much.
3. Don't give them all they ask for.
4. Don't bribe.
5. Don't cheat.
6. Don't threaten.
7. Don't talk about children before them.
8 Don't be cold and repelling.
9. Don't be discourteous.
10. Don't argue about discipline before them.

PROBLEM 1.—HOW MAY THE CHARACTERISTICS OF HUMAN NATURE BE UTILIZED IN THE CHILD'S TRAINING AND EDUCATION?

The Child Should Be Studied.—Have you ever heard such a remark as, "That woman is a strange mother. She knows nothing about her child"? Can you think of any mother who is of this type? Many people believe that just because a woman is a mother she knows exactly how to train her child; they say *mother instinct* is all that is needed. But knowledge of children's diet or diseases is not born in us;

it has been developed by scientific research and can be acquired only by those who will learn the necessary facts. Training the child is one of the most difficult responsibilities with which the home is confronted, and parenthood training that will give the knowledge of how to train the child is an important need. Frequently one hears the statement, "The child would be all right if the parents would only leave him alone." What do you think of this?

It is necessary for parents to know the characteristics of child nature, and to understand how to utilize them in child training. For example, he is a great imitator. This characteristic should not be curbed, but should be used as a means of establishing health habits and of teaching him to wait on himself and to be well mannered and courteous.

No two children are alike, and each child should be carefully studied in order to be understood. A sensitive, affectionate child may be crushed by a harsh, domineering parent who does not appreciate him. A child usually answers a person in the same tone of voice and manner in which he is addressed. Maybe you know a parent who encourages impudence in his child by the loud, sarcastic tones used in correcting him. One who thinks with his child about problems encourages the child to think independently.

Characteristics Common to Child Nature Should Be Considered.—If you have ever had the opportunity to be around little children, you are perhaps familiar with some of the characteristics which appear as a child grows up from babyhood. If we make an effort to understand the child's characteristics, his training is less difficult.

Playfulness is one of the outstanding characteristics of the child. He loves to play. It is his life. People used to think that the child merely played to fill in his time, but

now we know that he learns and develops through his play.

The child is very independent. He wants to do things for himself if only the adults will permit. He is also very susceptible to suggestion. If parents understand this fact, they will find the utilization of this characteristic a satisfactory method of controlling the child.

Little children are slow to understand. Parents too often become angry because a child is slow to move or obey, when he is only trying to understand what was asked or commanded.

The child is changeable, and his span of attention is very short. He lacks the power to stick to anything very long. He plays this game now and he prefers that song tomorrow. Have you heard a parent say, "No matter what the little child's interest is today, it will be different tomorrow"? It is this changeableness that helps bring about progress and development in the child.

The child is strongly influenced by the desire of the present. He wishes to do the attractive thing of the moment. This characteristic is noticeable in the baby. When an object is taken from him, he cries. The wise parent immediately attempts to interest him with something attractive and appealing. Since the new toy offers immediate satisfaction, the baby takes it and ceases crying, forgetting his loss. This interest in the present may easily be used in helping children to form habits.

The Mental Traits Should Be Cultivated.—Since mental traits are common to children and adults, they serve as a basis of training and education. What are the traits that all individuals should possess? The psychologists list them as curiosity, initiative, imagination, attention, observation, memory, reason, and caution. These traits must be trained

and directed in childhood in order that they may be of vital help to the individual.

Curiosity is the attitude of the individual who is interested in finding out facts. The child begins to ask questions early and instead of saying, "hush," the parent should take the time to answer him carefully and truthfully in as far as the child can understand.

The child's initiative should be developed or he will never learn to assume responsibility. His memory must be trained so that he may learn and be led to recall what he has learned. A little child, of course, should not be overtaxed with too much memorizing. The child will also begin early to reason, that is, to consider alternative aspects of problems.

The development of reason is made possible through opportunities for decisions and judgments even though the situation is of small consequence. Teaching children to think is a necessary part of education, which cannot be accomplished rapidly but which can be begun earlier than is often thought possible.

In developing attention in the child, the parent must not forget that it is of short duration. To expect a child to sit perfectly still through a long lecture or a church service is counter to nature. Careful attention for a brief period is much more constructive.

Through the imagination a new world is opened to children by which the creative ability is developed. The child should be encouraged to use his imagination and to enjoy excursions to the world of dreams and fancy. Vivid imaginary stories should not be confused with untruthfulness. If the child is encouraged to have his fancies and to realize that they are only fancies, his imagination has enriched his day. If his fancies are repressed and an outlet denied, a

situation has been established which may lead to untruthfulness.

The trait of caution should be understood, since too often through wrong treatment it is changed into fear. The world is all very strange to the child; there are so many new experiences, complex in their nature. If he has not time to proceed cautiously he becomes frightened and fearful.

The ability to observe is a trait that should be encouraged and developed. Have you ever tried to see how much you could remember of the contents of a box on a single scrutiny? Are you able to distinguish between birds of different species as they fly past? In Kipling's *Kim* (Chapter IX) you will find an interesting account of a boy's experience in training his powers of observation. Such power may be developed only through thoughtful training and exercise.

The Child Should Be Given Plenty to Do.—You are all familiar with the old adage, "Satan finds work for idle hands to do." This is a way of saying that mischief and idleness go hand in hand. Normal activity on the part of the child is often called mischief, because the result of the activity is annoying to the adults, or is destructive to property. Adequate play materials and plans for play are the best safeguard against mischief. When a child wanders aimlessly about looking for something to do, it is probable that he has outgrown the play material provided for him. He may need help in creating something out of what he has, or he may need material with more challenge in it. If you were to list the games you liked best at five, eight, and twelve years of age, in what regards would they differ?

Certain tasks which he must do daily help the child in many ways. Through completion of definite work, a sense of responsibility is developed, a spirit of service is established,

and skills are learned. Work that is not too long nor too hard is of great value to the child.

The Child Should Learn to Use His Emotions Wisely.—Have you ever seen a person have a sick headache from anger or fright? Have you ever been unable to concentrate on your studies because you were anticipating a party or an outing? These cases illustrate some of the ways that our emotions tend to control us. A child who is allowed to have tantrums of rage may affect not only his health but also his future happiness.

Perhaps you have seen a child whose reaction is entirely different. He may never show any emotion because he has been dominated by a stronger personality. Such a child, if this condition continues, may miss many of the joys of life. He is likely to develop the habit of imagining what might be, rather than doing things. It would be wise for the parents and the older brothers and sisters to help him find some means of self expression, rather than for him to stifle his emotions. The Boy Scout organization affords a fine outlet for the patriotism, chivalry, and desire for leadership of the growing boy.

In the case of certain emotions, the best help the child can have is not direction but evaluation. This is particularly true of anger and fear. Can you list all the things that have made you angry in the past month? Now that the strong emotion is gone, do you see any that might have been funny? There is nothing as helpful to the individual as the ability to find humor, rather than rage, in a situation.

Over-stimulation Should Be Avoided.—Have you ever seen a proud mother display her child's ability to speak or dance? What do you think of the practice of having children take part in *amateur night* at the theater?

One of the chief causes of nervousness in children is over-

stimulation. This is usually begun with little babies by bouncing and trotting them. The child of the pre-school age is often frightened by horrible tales of great bears that eat little boys, or policemen who take them to jail. Moving pictures depicting hair-raising escapes, exciting stories, and certain games further the over-stimulation. Parents should remember that the nervous system of the child is delicate and easily overstrained. Over-stimulation in childhood is a large factor in the nervous disorders of adult life.

Exercises.—A. From your observations on a child note the difference in his conversation on a given subject with children and with adults.

B. Observe a group of young children, noting what characteristics of human nature are evident.

C. Ethel, aged five, is very curious. She asks many questions. She also has a vivid imagination and frequently tells impossible stories about the achievements of herself and other members of her family. How can this trait be utilized to advantage in her training? What may result if these traits are repressed and crushed in their development?

PROBLEM 2.—HOW SHOULD PUNISHMENT BE USED?

Training in Self-control Is Necessary.—Children should be taught self-control early. There is nothing quite so pathetic or hopeless as the individual who cannot control himself. The young child is eager to satisfy his curiosity. He wants to touch everything he sees. He must learn not to touch the fire. He must learn to stay in his own yard, and later he must learn to have respect for the rights of others. He must learn to control his anger and to be kind and considerate. The most unhappy person in the world is the one who always has his own way and never gives in to others. He has not been trained in self-control. Punishment has long been one of the common means of developing self control in individuals. The fact that the means has not

been entirely successful may have been due to faulty methods and a lack of understanding of human nature. Certain common disciplinary measures are practically useless and certain others are known to be bad.

Don't Is Used Too Frequently.—How many times do you suppose the average mother says "don't" to her child? To say continually, "Don't do this," and, "Don't do that," is bad practice, for soon the child pays little attention to the command. Since the child is susceptible to suggestion it is much better to say, "Do this," or, "Do that." Offering the child something worthwhile to do, makes it unnecessary to say, "Don't, don't, don't." Saying "don't" becomes such a habit with some parents that they often use it without even considering what they wish done.

Threatening Is a Bad Method.—Do you know a parent who is always threatening his children with all sorts of terrible punishment? What do you think of such practice? Some parents use this method altogether too frequently. Sometimes very small children are threatened with a big, black bear, a bogey man, a policeman, or a dark room. What are the dangers of such threats? They will probably result in developing fear in the child.

Have you ever known a person to promise a child a certain punishment and then fail to carry it out? A four-year-old was doing something of which her aunt disapproved. Said the aunt, "What will mother do about it?" The little girl replied, "Oh, she will say she will whip me but she won't 'cause she never does." What effect would a long-continued practice of this kind have upon the child? There is no easier way to make a child dishonest or to lose his respect for his parent than by lying to him in this manner. The child soon regards the threat as a bluff and goes his own determined way.

Corporal Punishment Should Be Avoided.—Corporal punishment is not desirable. It is inhuman and has little to offer in its favor. Most parents whip children in anger when they have no control over themselves. Such discipline makes control possible only through fear and repression. Children are sometimes permanently injured from whippings and spankings.

The old idea of punishment was, "Spare the rod and spoil the child." But the new idea of punishment is based upon an understanding of child nature. The child is not by nature bad, but simply needs direction.

Punishment Should Be Constructive.—By this we mean punishment should lead to some good response from the child, and not to resentment and hatred. It should help the child to control and discipline himself. It should always direct the child rather than force him. The relation between the punishment and the offense should be clear to the child. If the child has eaten forbidden cake during his mother's absence, omitting desserts from his meals for a time might seem to be punishment related to the offense. A toddler who runs away may find an understandable punishment in being tied up like the cow or the puppy. Very little punishment is necessary if the environment is right. The parent should remember that what seems important to him may have little significance to the child; on the other hand, an event that seems trivial to the adult may be of great importance to the child. Jimmie may be told that he must come home for dinner at six. Just at ten minutes to six, the ball team of which he is captain may be tied with the opponents with two innings to play. To Jimmie it seems impossible for anyone to want him to come home for dinner under the circumstances. To the waiting family, the ball

game may seem far less important than their inconvenience through such a delay. What should be done in such a case? Each child requires individual treatment, so no one method can be offered. What is punishment to one child is not to another. Bread and milk for supper may be a punishment to James but it may be a treat to Mary.

Punishment will have small constructive value unless it helps the child to see the consequence or error of his act and also helps him to wish to avoid repeating the act.

Exercises.—A. If a three-year-old child refused to eat his food, what procedure would you follow?

B. Observe the various forms of punishment used by mothers which you know. Report the results. What suggestions have you to offer?

C. James, aged two, is a wilful child and quite determined in what he wishes to do. The only way his mother can get him to do as she wishes is to go to the door and call the policemen or a big black bear to come after James. What is your opinion of punishment of this kind?

D. Alva is four years old and is a very nervous, high-strung child, and somewhat of a coward. His parents believe in the old adage, "Spare the rod and spoil the child," and whip him frequently. What do you consider the good and bad points of this method of discipline?

PROBLEM 3.—HOW MAY MUSIC, LITERATURE, AND ART CONTRIBUTE TO THE EDUCATION AND TRAINING OF THE CHILD?

Music, Literature, and Art Have Much to Offer the Child.—They are themselves enjoyable and they are valuable aids in his training. If given an opportunity, children begin early to enjoy music, and to find friends in stories and pictures. Through music, literature, and art, the finest personal qualities, such as loyalty, sympathy, and courage, may be developed. Ideals of conduct may be suggested that are more effective than all the commands or "don'ts" ever said.

Songs, Games and Records Are Desirable Means of Training.—Music makes its contribution to the child's education through songs, games, and records. They train his ear for harmony, they develop his sense of rhythm, and give him a feeling of joy and happiness.

Fig. 128. Children singing. Courtesy of Playground and Recreation Association of America.

There are many songs and games written for little children. What is more fun for a child than to play and sing the game, "Mrs. Pussy Sleek and Fat" or "Ring Around the Rosy"? Talking machine records suitable for children are made by several companies. Records for such games as "Looby-Loo," "Did You Ever See a Lassie," "The Muffin Man," and "Jolly is the Miller Boy" are now available.

Even if the mother is not a musician, it is possible by the use of the phonograph to aid in the child's education in this field. It is interesting to watch children begin to love good music through contact with it. Whether one plays the piano or uses the phonograph, the children should hear some of the

Fig. 129. Children at Statue of Lincoln.
Courtesy of *Children*. Photograph by Ruth Alexander Nichols.

world's best music. "Childhood Scenes," by Schuman, "To a Wild Rose," by McDowell, "The Butterfly," by Grieg, and selections from "Il Trovatore," "Faust," and the "Nut Cracker Suite" are examples of music children learn to like. Cyril Scott's "Jungle Stories Suite," based on Kipling's stories, is a contribution from modern music. Contact with

these masterpieces is always helpful. One little girl when asked why she liked music, replied, "It makes me feel so happy when I hear it and I love to sing and sing."

Stories Provide Training.—Where is the child who does not love a story? Have you not heard again and again, "Please tell me a story"? Stories are a great means of training the child. Literature is filled with delightful tales that bring a new world to the child, acquainting him with new people and helping him develop a sense of right and wrong.

One of the common questions asked librarians by mothers is, "What is good to read to little children?" The child should be encouraged to read for himself, and he will often begin before he goes to school. Books are now available that make it possible for the child in any school grade to learn to enjoy good literature.

The following book list offers suggestions for the child's "reading," year by year. Check those books that you used or read as a child. What other books would you add to the list?

Much Use Should Be Made of Pictures.—Have you ever noticed how children prefer books with pictures? A small child will look at a picture and name the objects one by one as he discovers them. Until recently small account was taken of pictures as a means of training the child. Pictures suitable for the child should be chosen, and he should be given an opportunity to become acquainted with them since they have much the same place in the child's education as do stories and literature. Appreciation of art comes, not through reading a book on the beauty of some picture or collection, but through daily association and thoughtful contact with beautiful pictures over a long period of time.

Suggested First Books for Children

Books for the Baby

Picture Books—Linen

"Out of Door Friends." Samuel Gabriell & Sons.

"Four-footed Friends." Samuel Gabriell & Sons.

"Three Little Pigs." (Linenette board) Samuel Gabriell & Sons.

"The Railway Book." Samuel Gabriell & Sons.

"My Automobile Book." Samuel Gabriell & Sons.

Nelson, Gladys, "Animal Pictures." P. F. Volland & Co.

Nelson, Gladys, "Ships at Sea." P. F. Volland & Co.

Nelson, Gladys, "The Duck's Adventure." P. F. Volland & Co.

Mother Goose Rhymes

Walker, Edna L., "Mother Goose's Nursery Rhymes." Macmillan Co.

Smith, Jessie Wilcox, "Little Mother Goose." Dodd, Mead & Co.

Welsh, Charles, "Book of Nursery Rhymes." D. C. Heath & Co.

Greenaway, K., "Mother Goose." Fred. Warne & Co.

Falls, C. B., "A. B. C. Book, Mother Goose." Doubleday, Doran & Co.

Poems

De la Mare, Walter, "A Child's Day." Henry Holt & Co.

For the Two-to-Three Year Old

Picture Books—Simple text

"The Three Bears." Tuck, London.

Crane, Walter, "This Little Pig Picture Book." Dodd, Mead & Co.

Crane, Walter, "Old Mother Hubbard." Dodd, Mead & Co.

Crane, Walter, "The Kathy Kruse Doll Book." Doubleday, Doran & Co.

Meggendorfer, L., "Noah's Ark." J. F. Schreber, Munich, Germany.

Williams, "The Velveteen Rabbit." Doubleday, Doran & Co.

Rhymes

Wright, Blanche F., "Favorite Rimes for Little Tots." Rand, McNally & Co.

Grover, E., "Mother Goose." P. F. Volland & Co.

Greenaway, Kate, "Marigold Garden." Fred. Warne & Co.

Baron Krukensides, "The Careless Chicken." Fred. Warne & Co.

Coussens, Penrhyn W., "Poems Children Love." Dodge.

Mee, John L., "The Three Little Frogs." P. F. Volland & Co.

FOR THE THREE-TO-FOUR YEAR OLD

Story Books

Bannerman, Helen, "Little Black Sambo." Fred A. Stokes Co.

Potter, Beatrice, "The Story of Miss Muffet." Fred Warne & Co.

Clark, Marjorie, "The Poppy Seed Cakes." Doubleday, Doran & Co.

Potter, Bernica, "The Tale of Peter Rabbit." Fred Warne & Co.

Ornton, Helen Fuller, "The Little Lost Pigs." Fred A. Stokes Co.

"Old, Old Tales Retold." P. F. Volland & Co.

Robinson, Geraldine, "Three Little Kittens in a Boat." Fred. Warne & Co.

Verse

Milne, A. A., "When We Were Very Young." E. P. Dutton & Co.

Stevenson, Robert Louis, "Child's Garden of Verses." Rand, McNally & Co., and Chas. Scribner's Sons.

Field, Eugene, "Poems of Childhood." Chas. Scribner's Sons.

Rossetti, Christina, "Sing Song." Macmillan Co.

FOR THE FOUR-TO-FIVE YEAR OLD

Story Books

Kipling, Rudyard, "Just So Stories." Doubleday, Page & Co.

McDonaldson, Ellen M., "Little Papoose Listens." Milton Bradley.

New Type Stories

Mitchell, Lucy Sprague, "Here and Now Story Book." E. P. Dutton & Co.

Adams, Cornelia, "The Make It Up Story Book." R. M. McBride & Co.

Bryant, Sara Cone, "New Stories to Tell Children." Houghton Mifflin Co.

Skinner, Eleanor L., "Nursery Tales from Many Lands." Chas. Scribner's Sons.

Rickert, Edith, "Bojabi Tree." Doubleday Page & Co.

Bianco, M. W., "The Little Wooden Doll." Macmillan Co.

Verse

Edgar, M. G., "Treasury of Verse for Little Children." Macmillan Co.

Chisholm, Lovey, "The Golden Staircase." G. P. Putnam's Sons.

Fables and Nursery Tales

Paulsen, V., "Æsop for Children." Rand, McNally & Co.

M. Boutet de Monvel Plon, "Fables de la Fountaine." Nourrit, Paris.

Bailey, Carolyn S., "Folk Stories and Fables." Milton Bradley.

Dasent, "Popular Tales from the Norse." G. P. Putnam's Sons.

Felicitie LeFevre, "The Cock, the Mouse, the Little Red Hen." MacRae, Smith Co.

Many Children Enjoy the Moving-picture Theatre.—Have you ever watched the crowd pour out of the moving-picture theatre after a show? How many of the people in attendance were under ten years of age? Under fourteen years of age? Perhaps you looked at the picture that was advertised and wondered what they would find in it to interest them. Have you ever felt that the picture was a very poor one for a children's audience? What pictures have you seen that you think are unsuitable for children of eight or ten years?

Because so many pictures are vicious, horrible, or vulgar some parents do not allow their children to attend any performance. Such parents say:

1. The pictures present extravagance attractively.
2. The pictures teach that you *bluff* and succeed.
3. The pictures make bad character traits appear interesting and desirable.
4. The pictures present crime and law violation in such detail as to encourage wrong-doing.
5. The pictures are unduly exciting and lessen the child's enjoyment of reading and home entertainment.

Do you think that these statements are true of all pictures; of most pictures; of some pictures? Can you name a picture about which these statements are not true?

Perhaps the wise parent will not forbid his child to attend the moving-picture theatre but will help his child choose carefully the pictures he is to see.

In general, the younger children like best pictures that have action, pictures that have intelligent animals, and pictures with a certain amount of *slap-stick* humor. Certain magazines help the parent in the choice by reviewing the new films as they come out. See if you can find descriptions

of films that you have seen and compare them with your own impressions.

A rule often given school children is, "No night pictures on school days, and usually not more than one picture a week." What do you think of such a rule? For what age children should it apply?

There is an educational value to a good film that is akin to that of travel.

Enjoyment of Form and Color Should Be Developed Early.—If you observe a little child for long, you soon notice that he prefers certain objects to others and enjoys certain colors more than he does others. Sometimes this preference for an object is due to its shape or form. He will like a certain dress because of the color of the material or the trimming. Red is one of the first colors recognized by the child, and many children always prefer red and pink. Study is being made of the reaction of children to form and color. In a few years we may know more about this subject. Even now we know that nothing gives a three- or four-year-old child more real pleasure than a box of colored crayons and some paper. Much valuable training will come through such means. Such training is best provided by encouraging the child to draw what he wants to and as he wants to, and then having him tell what he has drawn; not by telling the child how to draw. Skill in drawing will come later. Encouragement in the use of the pencil, crayon, or color in his own way is the first step.

Exercises.—A. Make a list of the music and stories which four-year-old children enjoy.

B. Make a list of the pictures four- or five-year-old children enjoy.

C. Walter, aged four, loves stories. He never tires of having his parents and aunt read or tell him stories. How can this interest of Walter's be used to advantage in his training?

PROBLEM 4.—WHAT DOES THE CHILD LEARN FROM NATURE?

The Great Out-of-Doors Offers Much to the Child.—Next to the home the child receives his greatest training from nature. Here he comes to know the trees, the birds,

FIG. 130. Child's own garden.

the flowers, and the brook. He sees growth and change each day and comes to see cause and result in simple relationship. The open air offers him health, recreation, and freedom. Even the rocks and stones tell him a story of strength and constancy.

The Camel's hump is an ugly lump
Which well you may see at the Zoo:
But uglier yet is the hump we get
From having too little to do.

The cure for this ill is not to sit still,
Or frowst with a book by the fire:
But to take a large hoe and a shovel also,
And dig till you gently perspire.

KIPLING

A Love for Living Things Is Developed.—Through nature the child learns to love life and living things. He makes friends with the animals. In the spring he sees the bird build her nest in the tree. In the fall he watches the squirrel gather his food for the winter. The plant which grows and blooms interests him as does the spider spinning her web. As he becomes acquainted with these forms of life, he develops a deep affection for all living things which enables him to be a kind and sympathetic individual.

From Nature to History Is Often an Easy Step.—Nature study is often the gateway to history. The child becomes interested in the trees, and he wishes to know more about them; he becomes interested in the rocks, and he wonders about the age of the earth; he becomes interested in the river and he seeks to know how long man has known this valley. Here the child's trait of curiosity may lead to an interest in history which will bring him the story of the past.

Through Nature a Good Attitude Toward Life Is Developed.—Through nature-study the child may develop a scientific attitude. He becomes observant and seeks to know the truth. He also learns respect for law and order from his contact with living matter.

The story of nature is in sharp contrast with the cinema stories. Here there is no intervention. The developments are logical. If there is no rain there is no growth. If light-

ning strikes a tree, it is blackened and dies. The story of life is told by plant, bird, and insect, simply and truly. The superficial and tawdry can scarcely become a part of one who has had a love of nature from childhood.

Fig. 131. Birds are interesting to children.
Courtesy American Museum Natural History, N. Y. City.

Exercises.—A. Cite some specific ways of teaching children to love nature.

B. Report on the life of a great naturalist.

C. Porter, aged five, likes to be out of doors. He loves the birds, trees, rocks, and plants. He asks many questions concerning them. How can this love of nature be used to advantage in his training?

If it is possible to arrange for you to observe some children, either at home or elsewhere, use of the following outline will direct your observations.

Suggested Outline for Your Observation of Children

Student's name———— date ———— child's name ————
Place of observation ———————— Time ————
(church, home, school, playground.)

General Instructions.—The chief object of your observation is to give you a greater knowledge and better understanding of little children.

You can best gain this: (1) By remaining in the background, giving no indication of amusement, making no comment, and starting no conversation with the children or with others. (2) By locating your chair so you are not in the way of the children, and not hiding any of the playthings. (3) By not disturbing their activity by either your coming or going.

Your observations may be made on one or more of the following points, or one or more children. A separate record should be made for each child In each case be explicit and exact in your statements. If you are interested in one phase more than another, choose that for your study. Perhaps your teacher will help you with further details for observation if you so desire.

What Does the Child Do?—1. How long does he engage in each activity?

2. What toys does he use?

3. Does he play by himself or with others?

4. Does he imitate some one else or do others imitate him?

5. Is he enthusiastic in his play?

6. When he changes from one play to another, what reason do you see for the change?

To What Extent Can He Help Himself?—1. Is he able to wash himself?

2. Does he get out his toys?

3. Does he put them away?

4. Does he often ask, "Do this"?

What Is His Reaction to the Other Children?—1. Is he *bossy?*

2. Does he interfere with the play of other children?

3. Is he selfish?

4. Does he like to *show off?*

5. Is he shy?

6. Is he irritable?

7. Is he quarrelsome?

8. Is he sympathetic?

In each case give specific details as to what was said and done. From these observations, draw conclusions concerning the characteristics of the child observed.

See if you can find in the list at the right the correct word for each blank.

1. The child finds friends in ———— and ————.

2. Music develops desirable personal ————.

3. Music is taught through ————, and ————.

4. Stories bring to the child a new ———— and ————.

5. ———— is one of the first colors recognized by children.

6. Through the ————, ————, ———— and ———— the child learns to love nature.

7. Nature teaches the child respect for ———— and ————.

1. Songs
2. Trees
3. World
4. Red
5. Birds
6. Stones
7. Independent
8. Flowers
9. Games
10. Qualities
11. Changeable
12. Order
13. Slow to understand
14. Constructive

8. Some characteristics which are common to child nature are ————, ————, ————, and ————.

9. The nervous system of the child is ———— and easily ————.

10. All punishment should be ————.

11. Very little punishment is necessary if the ———— is right.

15. Law
16. People
17. Overstrained
18. Character
19. Brook
20. Pictures
21. Playfulness
22. Environment
23. Records
24. Delicate

Additional Problems and Exercises.—1. Visit a kindergarten or primary grade and note the methods used in training the children.

2. Observe first-graders on the playground, noting their courtesy, sportsmanship, initiative, and persistence.

3. What methods of punishment would you recommend for a two-year-old; a five-year-old?

4. Plan and give a party for some little children.

5. Make a list of nature stories which are suitable for a four- or five-year-old child.

Books for Class Reference:

McCarthy, F. H. "The Healthy Child from Two to Seven." Macmillan Co.

Groves, E. R. and G. H. "Wholesome Childhood." Houghton, Mifflin Co.

Thom, D. A. "Everyday Problems of the Everyday Child." D. Appleton Co.

Suggested Bulletins and Leaflets for Teacher and Students:

Thom, D. A. (M.D.) "Child Management." Revised, 1927. Five cents. Children's Bureau, U. S. Dept. Labor, Washington, D. C.

Crowninshield, Ethel. "Mother Goose Sings for Little Ones. Old Dutch Nursery Rhymes." David McKay, 601 So. Washington Square, Philadelphia, Pa.

Paulson, Emilie. "Finger Plays for Nursery School and Kindergarten."

UNIT FIVE

OUR RESPONSIBILITY TO ALL CHILDREN

Introductory Studies.—1. What institutions in your state care for orphans? for defectives?

2. Which of these are state supported?

3. What is meant by "delinquents"? What provision is made in your state for their care?

4. How many children from your community attend the state school for the blind; the state school for the deaf?

5. How many children are engaged in child labor in your state?

Presentation of the Unit.—So far in our study we have thought only of those children who are under the influence and training of their own home and family. Not all children are so fortunate. There are many children who are special *wards* of the state. Some of these children have good homes but have some handicap or defect which requires help from the outside to assist with their training and education.

The *wards* of the state include orphans, cripples, mentally defective children, the blind and deaf children, and the delinquents who need special help in learning to become good citizens. With the exception of the orphans, who are homeless, these unfortunate children need special attention and training which the regular schools are not prepared to offer. Since the community sees in children its future citizens and realizes that every child must be cared for and fitted for some useful work, provision is made for these special cases.

The well-being of all children, both mental and physical, is a concern of the community and the home. It is not possible to say, "I am looking after my own family, I have no concern about that bad boy." The delinquent next door

may be influencing the child in your home for the worst possible career.

We may feel that since our children are protected and are not crushed by child labor that child labor is no concern of ours, but such is not the case. Disease that may accompany overwork in childhood is a community hazard. Further, every one of us has a responsibility toward all children.

PROBLEM 1.—WHY SHOULD THE COMMUNITY ASSUME RESPONSIBILITY FOR THE LESS FORTUNATE CHILDREN?

The Community Is Interested in the Welfare of Its Children.—For how long a time do you suppose nations have been interested in their children? We find by reading history that the child has been an object of concern for many centuries. Of course, in the earliest time the interest was in part due to need of warriors, but records show that in Babylon in 2800 B.C. some provision was made for widowed and deserted mothers and their children. The Spartans had strict rules about the care and training of children. In A.D. 14, Emperor Augustine paid a sum of money to any family who would rear an orphan. One of the first works of the early church was to establish orphanages.

The interest of the community in its children is keener now than it ever has been and its concern is no greater for one child than it is for another. If any child is unable to participate in the usual educational opportunities provided by the community, others which are more suitable for him are furnished.

These Less Fortunate Children Need Help and Protection.—The more unfortunate a child is the more he needs the help and protection of the community. He needs help

in becoming a useful citizen; he needs protection because he is handicapped and cannot take care of himself.

Every child needs the influence and the protection of a good home, and the child without one has a serious handicap. The community, then, must do its best to provide him with the next best thing.

The community has certain obligations to the child. It must protect his life, preserve his health, provide him with opportunity to play, give him freedom from excessive toil, and give him an opportunity for an education.

They Need an Opportunity to Develop to Their Capacity.—Have you ever known of a blind person achieving greatness? How was this possible? We all marvel at the accomplishments of Senator Gore and Helen Keller. Suppose there never had been an opportunity for them?

A cripple or a blind man begging on the street suggests the comment, "That person might be doing some worthwhile work in the world if he had only been given an opportunity."

There are many lines of work for which deaf, blind, and crippled children can be prepared. In a like manner training should be provided for those who have not a high quality of mental ability. In progressive communities, these unfortunate children are trained according to their best capabilities. The regular schools are not prepared to give them the correct training, so special schools must be provided. Similarly the delinquent who has difficulty in learning to conform to the rules and conventions of society must be trained, and special schools are necessary for him.

They May Become a Community Liability.—In what ways may these neglected and unfortunate children become a community liability? Any citizen who is not law-abiding and self-supporting is a community liability.

Though it is better to give the proper care to the children because they need help and we are interested in them, such cases may well be considered from an economic standpoint. Our asylums and penal institutions are filled with hundreds of people who are now liabilities. It is possible that many of these might have been assets had they been given the right opportunity in childhood.

Exercises.—A. Make a report of the successful achievement of some individual who was handicapped by some serious physical defect.

B. When Helen was four years old she was very ill with a disease which left her deaf. When she became of school age, her mother found that the regular public school was not suited for training her; so she was sent away to the State school for the deaf. Why does the community make such provision for children like Helen? Why should her mother make use of this opportunity for Helen?

PROBLEM 2.—HOW DOES THE STATE PROVIDE FOR THE LESS FORTUNATE CHILDREN?

All States Make Some Provision.—This indicates the nation-wide interest in the welfare of children. Each state has its own laws in regard to this and, of course, a wide variation is found in these provisions. Some states have much better laws than others, and some of the states forget part of their unfortunate children entirely. For example, in one state so much value is placed upon home life for children that the state builds cottages and cares for these dependent children in family groups. In another state no provision is made for orphans under two years of age. Just what is to be done with children who become dependent and are not old enough for the state's protection, no one seems to know.

No matter how far the provision of any state may be from the ideal, it has progressed a great distance since the

time, not so long ago, when orphans, paupers, criminals, and feeble-minded were alike thrown into the same prison.

The Defectives Are Cared For.—This group includes the blind, the deaf, the cripple, and the feeble-minded. Defectives should be educated and trained by the state and should not be objects of charity. Their education should be compulsory, as it is in the regular day school.

Practically all states provide schools where these children are given training comparable to that offered in the public schools. Opportunity is given for the boys and girls to learn a trade, and some children are encouraged to go to institutions of higher learning. Gallaudet College in Washington, D. C., is a college for the deaf. Blind children are often taught music and certain types of manual arts work. Through training in these lines, these unfortunate children may become happy and useful self-supporting citizens.

Less has been done for the crippled children because the community has failed to realize their need. They have a difficult time in the public schools. They have no opportunity for play, are shy and self-conscious, unhappy, and often backward because they have been unable to enjoy the opportunities that physically normal children have. A few states have established schools for them and a number of cities have done likewise. Their classes are on the first floor and they have special play apparatus and facilities. Sometimes it is discovered by thorough physical examination that a crippled child may be helped by surgical attention.

The feeble-minded children are provided in all states with institutional care. They are the most hopeless of the defectives. Heredity has given them little; environment must do all within its power. Although such children must always remain within the institution, they can be taught

Fig. 132. Pupils of the Kansas State School for the deaf at Olathe have a field meet every year. They are expert at manual expression. Courtesy *Hygeia*.

many useful activities and thus become as happy as it is within their power to be.

Many cities maintain open-air schools for tubercular children. This movement began in Europe, but is spreading rapidly in this country. Food at lunch and between lunch periods is supplied, and time is given for rest. By means of the open-air school, the health of the children is built up while they are still kept busy in their school work.

We must ever keep in mind that "all inherited traits, whether mental or physical, can be accentuated, altered, controlled, and sometimes definitely eliminated by environment." A great contribution to the child is that of molding his environment so that it is a favorable one.

Industrial Schools and Parole Systems Are Maintained for the Delinquents.—The attitude toward the delinquent has undergone a complete change in the last twenty years. We no longer regard children as entirely responsible for crimes which they commit. Although in the past, young children have been tried in court as criminals and put in prison with all sorts of mature and hardened lawbreakers, this is not now considered the wisest method of disciplining delinquents. We regard as a delinquent not only the child who is a lawbreaker, but also the one who has wayward tendencies. By this means it is possible to provide for the care of the child before he becomes a criminal.

Practically every state has provided juvenile courts with a special judge and a regular system of parole. Here a judge specially fitted for work with children hears the cases and recommends the corrective treatment to be used. The child is paroled to some responsible person and makes regular report to the judge. If, after a thorough trial, the child does not respond to the parole, he may be sent to the industrial school which the state provides for delinquents. We no

longer call these "reform" schools because the idea now is not only to reform, but to give delinquents training and education for useful life work. Much delinquency is caused by poor home and community environment. It is a sad situation when we call children, seven, eight, ten, and twelve years old, "delinquent" at the same time knowing that it is the home and community that are really delinquent in having failed in some way to meet their responsibility in giving adequate moral training.

Some States Maintain Orphanages and Hospitals for the Care of Children.—Any child who is thrown upon the public for support is called a dependent child. This includes the child who is homeless, abandoned, destitute, or neglected in any way. Most states have been slow in caring for these children, leaving them to charity and philanthropy. However, some states are providing orphanages and hospitals for these children, and most states have organizations that promote the adoption of children into foster homes. A study of the causes of dependency reveals a number of closely related factors. Poverty and conditions bringing about the breakdown of the home are the greatest causes of dependency. The number of dependent children is very large, indicating the need of organized help on the part of the community.

Pensions for Widows with Children Are a Preventive Measure.—This method of providing for less fortunate children has been adopted in nearly all states. People realize that as a rule the best person for the child to be with is its mother and that no influence is equal to that of the home. People realize, also, that it is much less expensive for the state to keep the mother in the home with the children than to provide institutional care for them. Although the

amount provided by mother's pension is usually small, it does furnish a means of keeping the family together.

Exercises.—A. What provision does your state make for its unfortunate children?

B. Make a report on one of your state institutions for defective, dependent, or delinquent children. How effective do you consider the work of these institutions?

C. Bertha, aged fourteen, has no father, and her mother lives in another town and pays no attention to her. She stays here and there and no one cares much about her. Last winter she began staying out at night and keeping bad company and she was reported to the Judge of the Juvenile Court. What steps will the state take in caring for Bertha?

PROBLEM 3.—WHY DO WE HAVE CHILD LABOR LAWS?

Child Labor Has Long Existed.—It is not a new thing, for people have *worked* their children without regard for their well-being for many centuries. From the earliest times, when child life was regarded lightly, child labor in the family group was doubtless universal, but the Industrial Revolution brought the modern problem of child labor in the factory, *speeded* by the machine. England was the leader in utilizing unwisely the labor of young children in factories, and America has offended similarly. Mrs. Browning's poem, "The Cry of the Children," was an expression calling attention to the abuses of the practise. Soon reformers began to study child labor and secure remedial laws.

In the United States there are more than 1,600,000 child laborers.

Sixteen states permit children under sixteen to work more than eight hours a day.

In fourteen states children under sixteen are allowed to labor at night.

Three states permit children under fourteen to work in factories.

A chain is only as strong as its weakest link.

These overworked children are the parents of tomorrow, the lawmakers and the lawbreakers.

What are you doing to make better child labor laws in this country?

While there is much American sentiment against child labor at the present time, all attempts to pass federal child-labor laws have met with failure in our country. The laws in the individual states vary in their requirements but are gradually being made more effective. Many people do not

Fig. 133. A six-year-old beet picker of Colorado. The beets weigh from three to ten pounds each. Courtesy of *Hygeia*.

understand what is meant by child labor, and think that any such legislation will result in bringing children up in idleness. Child labor means working children beyond their strength and keeping them out of school to do so.

Many People Still Exploit Children.—There are always some employers who have no consideration for anyone but

themselves. Consequently, they are quite willing to exploit children if it will bring them any profit. There is also a large group of parents who through ignorance and greed fail to protect their children against such employers. The child is not in a position to judge wisely, and when dissatisfied with school may himself insist on going to work when his real advantage lies in further schooling.

Sometimes people fail to realize that modern conditions are different from the past; believing that because they began work as children and worked up to their present positions children can do so today. Such is not the case when all work is so highly specialized.

The census figures show that child labor is found in many different occupations; agricultural, domestic, personal service, manufacturing, mechanical pursuits, trade and transportation, and professional service. The number of children employed in the United States totals over one million, sixty-one per cent of which are in agriculture. Even though much of this work is seasonal, it would indicate that the exploitation of children is still common despite the present sentiment against it.

Child Labor Injures Children.—It has a bad effect upon their growth and development. If it does not break them down in health immediately, it may affect them so that they are likely to be weak and sickly adults. In childhood the foundation is laid for strength and vitality. If the child is prevented from building a strong healthy body, he is deprived of one of his sacred rights. Some occupations are by nature injurious to the child. Work in cotton mills, coal mines, glass factories, and the strain of overwork and long hours anywhere, as on the farm, may result in tuberculosis and other diseases that will play havoc with weakened bodies.

Child labor may result in death during childhood or

death in early adult life. The death rate of children in certain factories is very high. Accidents occur more frequently among child employees than among adults because children are not capable of long attention periods, and are apt to be more careless.

Child labor tends to have a bad moral effect on children. Many of the occupations in which children engage place

Fig. 134. Drudgery that destroys health, by Blount. Courtesy of Allyn & Bacon.

them in contact with debasing conditions. Records show that the percentage of delinquency is greater among working children than non-working. Night work in factories also has a bad effect upon the morals of children.

Child Labor Is an Economic Loss to the State.—Though child labor on first thought may seem to be desirable because it brings money to the child and his family, in the end it is an economic loss. If the child is injured or broken in health he becomes an expense to his family and often to the state.

If he becomes a weak, sick adult there is again a personal and social loss. Child labor draws upon the labor of our country before it is fully developed, and thus tends to decrease the total amount of labor power in a given generation and hence the net amount of benefit secured.

Child labor prevents the development of efficient workers, because the child enters industry without the proper training. He is thus more apt to stay in an unskilled or low-paying job all his life.

Child labor by competition reduces the wages of adults and this in turn lowers the standard of living of the families concerned. In communities where child labor is employed extensively the average income of the entire family is no larger than that in communities where the responsibility of the support of the family depends upon its head. Child labor prevents the child from acquiring an education. He is therefore handicapped in becoming an efficient citizen.

The State Must Protect Its Children.—Children are unable to understand their future needs, and consequently may feel that they are choosing wisely when they leave school to work. The few dollars per week look very attractive to them. Parents are often so ignorant and greedy that they have little concern for their children's future. Employers are sometimes so eager for more money that they are very glad to take advantage of the children in order that their profits may be increased.

The state must protect its children against such far-reaching wrongs and abuses. One of the best means of protecting the children is the compulsory education law, which requires children to be in school until sixteen or eighteen years of age and which prohibits them from being at work until that age. The laws should be uniform between the different states, and should establish specific age limits,

physical qualifications, and educational requirements. Limited hours of labor and forbidden night work and work in hazardous trades should be stipulated. A minimum wage might well be established for child workers. Our nation cannot afford to blind itself to the evils and wrongs of child labor.

Exercises.—A. What are the child labor laws in your state?

B. List the arguments for and against child labor.

C. Mr. Smith became very angry when he was not allowed to take his eleven-year-old son Bob out of school to work in the box factory. He insisted that Bob was his child and he had a right to make him contribute to the support of the family. The truancy officer and the Judge told him that this action of his was against the law. Mr. Smith made some ugly remarks. Why did the State take action in Bob's behalf? Why did our State make laws against child labor?

PROBLEM 4.—WHAT ORGANIZATIONS ARE INTERESTED IN THE WELFARE OF CHILDREN?

The Interest in the Welfare of Children Is Increasing.—People are realizing as never before the importance of the proper care and training of children during their early years. The fact that a child has no immediate relatives and friends to protect and help him is all the more reason for others to be interested in him. Children whose parents are immoral or criminal also need protection. The increasing interest is shown by the specific work that is being done by communities and individuals for the protection of childhood. What is your community doing for the welfare of its children? In what other ways could it help its children? Very often, lack of interest is due to selfishness, ignorance, and indifference on the part of people concerning the importance of caring for all the children in our country.

Many Organizations Are Interested in Children.—These organizations are contributing much for the welfare of chil-

dren. When people work in groups it is possible for them to accomplish more than when working alone. Do you have organizations interested in children in your community? What is the nature of the work which they do?

Fig. 135. Paying tribute to the unknown soldier. Patriotism in story and song gained in significance to thousands of children who participated in the spirit of this tribute at the National Club encampment. Courtesy Boys & Girls Club Dept., Kansas State Agr. College.

The Children's Bureau at Washington, D. C., which was established in 1913, has given great impetus to the child-welfare program. Its program includes child health, reduction of infant mortality, protection of children and mothers, and abolishment of child labor. Bulletins and other printed material on these subjects may be secured from

the Bureau. Mothers may obtain information and help on infant care and on these other phases as well. The Bureau

FIG. 136. First-hand knowledge of the Nation's capital increases one's interest in the storied past. Courtesy of Boys and Girls Club Dept., Kansas State Agr. College.

conducts many studies and much research to help in finding a solution to the many problems in this field.

Most of our states have children's bureaus or divisions of child hygiene which have programs similar to those of the Federal Bureau, only not on such an extensive scale. The Sheppard-Towner Act, which was passed by Congress in 1921, was a means of aiding the states in their children's bureau work. This act made it possible for the federal government to grant a sum of money to each state, providing the sum was matched dollar for dollar by the state, to be used in reducing maternal and infant mortality and in protecting the health of mothers and babies.

The National Child Welfare Association is interested in the children of our country. It conducts studies and research along the lines of child labor, dependency, and delinquency, and is directly responsible for legislation along this line in many states.

The American Home Economics Association has a child development program. At the present time it is directing a special study in child care and training, which was made possible by a grant from the Laura Spellman Rockefeller Memorial fund.

The American Child Health Association has an extensive program for child health. It advocates a nation-wide health program and work through nutrition and pre-school centers, and nursery schools, public schools, and colleges. All sorts of health materials well adapted to all ages and types of people are available from the association. Stories, games, and songs are published for the children; books and bulletins for mothers and fathers.

The Extension Service of the United States Department of Agriculture has launched an extensive program of Boys and Girls Club work throughout the country. Every state is served by this movement. It functions not only through its local program of better gardens, better calves, better

health and the like, but also gives a marked impetus to state and national outlook by means of the yearly roundup in the states and annual encampment in Washington.

The Federal Board for Vocational Education is much interested in the children of our country. Units of health and child care are taught in all of the vocational schools.

This list is by no means complete. What other organizations can you name? What are their programs of work? These organizations which are doing so much for the children of our country should receive our support and encouragement.

Exercises.—A. Make a report of one of the following phases of work of the American Red Cross: Red Cross Nutrition Service; Red Cross Disaster Relief; Red Cross War Service.

B. When Mr. Jones was not permitted to overwork and abuse an orphan boy of ten years whom he had living with him, he became very indignant and wanted to know who was responsible for all these laws favoring children. What organizations and groups not mentioned above can you think of that are interested in children and have been instrumental in securing protection for them?

C. These questions can be answered very briefly; see if you can do it with one word, a phrase, or a short statement:

1. Who are the *wards* of the state?
2. Why is the community interested in its children?
3. Who are some persons who have achieved greatness in spite of handicaps?
4. How are the defective children cared for?
5. What type of care is given the delinquent child?
6. Why do some states provide pensions for widows with children?
7. Why is child labor a bad practice?
8. Why are many organizations interested in the welfare of children?
9. What are three such organizations?
10. What work are they doing for children?
11. Why should we be interested in children other than our own?
12. What occupations employ child labor?

Additional Problems and Exercises.—1. Which costs your state more, the education of day-school children or the care of mental defectives?

2. How many children are engaged in child labor in your state?

3. Write an account of the history of child-labor legislation in the United States.

4. What were the provisions of the Sheppard-Towner Act? Was its enactment a wise act? Explain your reasons.

5. Make a report of the program of some organization which is interested in the welfare of children in your state.

Books for Class Reference:

Publications on Child Welfare from Children's Bureau, American Child Health Association, and Child Study Association of America.

Suggested Bulletins and Leaflets for Teacher and Student:

"Adoption Laws in the United States." No. 148: a summary of development of adoption legislation and significant features of adoption statutes, with the text of selected laws, by Emelyn Poster Peck. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

Bloodgood, Ruth. "The Federal Courts and the Delinquent Child; a Study of the Methods of Dealing with Children Who Have Violated Federal Laws." No. 103. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

Brown, S. A. and others. "Children working in sugar beet fields of certain districts of the South Platte Valley Colorado,." Pub. 333. National Child Labor Committee, N. Y. C.

Byrne, H. A. "Child Labor in Representative Tobacco Growing Areas." Pub. 155. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

Channing, A. "Child Labor in Fruit and Hop Growing Districts of the Northern Pacific Coast." Pub. 151. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

"County Organization for Child Care and Protection." No. 107. Twenty cents. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

"Community Care of Dependent, Delinquent, and Handicapped Children." Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

"Federal Control of Child Labor." A list of references. Leaflet. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

"Foster-Home Care for Dependent Children." 136 Revised, 289. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

"From School to Work." Folder No. 6, Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

Gibbons, E. and Bell, H. M. "Children Working in the Sugar Beet Fields of Certain Districts of the Western Slope of Colorado." Pub. 327. National Child Labor Commission, N. Y. C.

"Vocational Guidance and Junior Placement; Twelve Cities in the U. S." Prepared by Industrial Director of the Children's Bureau and the Junior Division of the U. S. Employment Service. No. 149, 440. Children's Bureau, U. S. Dept. of Labor, Washington, D. C.

Home Projects.—1. Make a conscious effort to develop some desirable trait in yourself and report your success, the difficulties encountered, and your opinion of the value of such a project.

2. Wash and iron the clothing of an infant for a definite period of time.

3. Bathe and dress a small child daily for a definite period of time.

4. Put a small child to bed daily for a definite period of time.

5. Make a number of garments for a baby or small child.

6. Keep a growth record of a young child for two months.

7. Care for a baby or small child on Saturday for a given period or for a certain number of times.

8. Care for a baby or small child during church service for a mother for several Sundays; or help organize in your church a "church nursery" to care for babies during the service.

9. Observe a baby's development for three or four months, and make a detailed report of such observations.

10. Tell some good story to a child daily for a given time and make notes of his questions and attitudes.

Additional Books for the Teacher:

Arlitt, Ada Hart. "Psychology of Infancy and Early Childhood." Magraw Hill.

Blanton and Blanton. "Child Guidance." Century Co.

"Concerning Parents—Symposium." New Republic Co.

Fenton, J. C. "Psychology of Babyhood." Houghton, Mifflin Co.

Fisher, D. C. "Mothers and Children." Henry Holt & Co.

Goodspeed and Johnson. "Child Care and Training." J. B. Lippincott Co.

Guyer, M. F. "Being Well Born." Bobbs-Merrill.

Norsworthy, N. and Whitley, M. T. "Psychology of Childhood." Macmillan Co.

Mangold, G. B. "Problems in Child Welfare." Macmillan Co.

Magazines:

"Hygeia." "Children." Children's Bureau publications on "Care of Children and Child Welfare."

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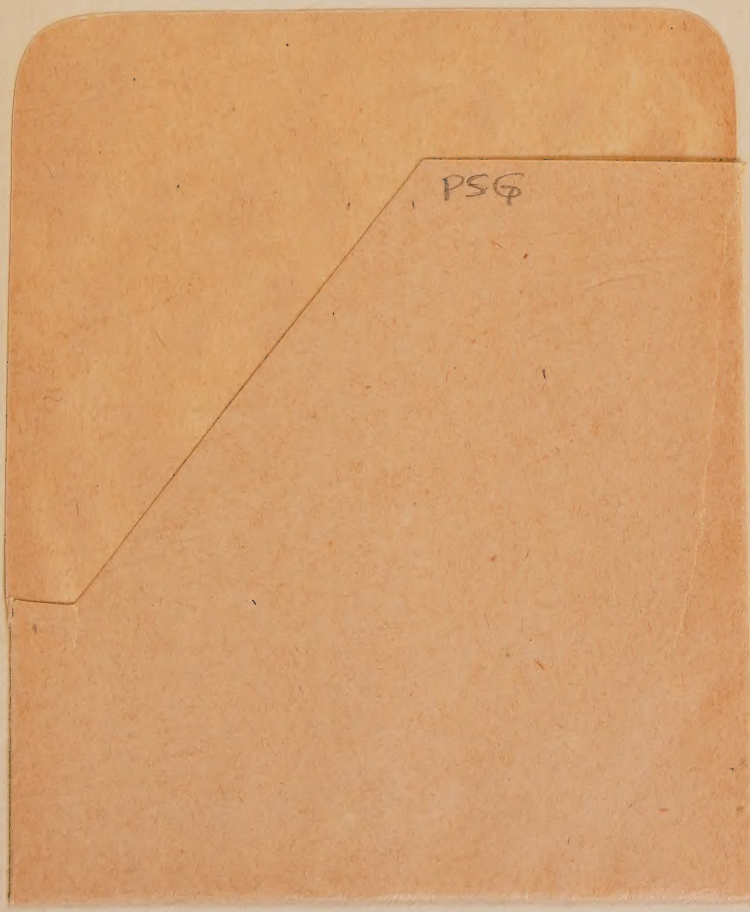
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